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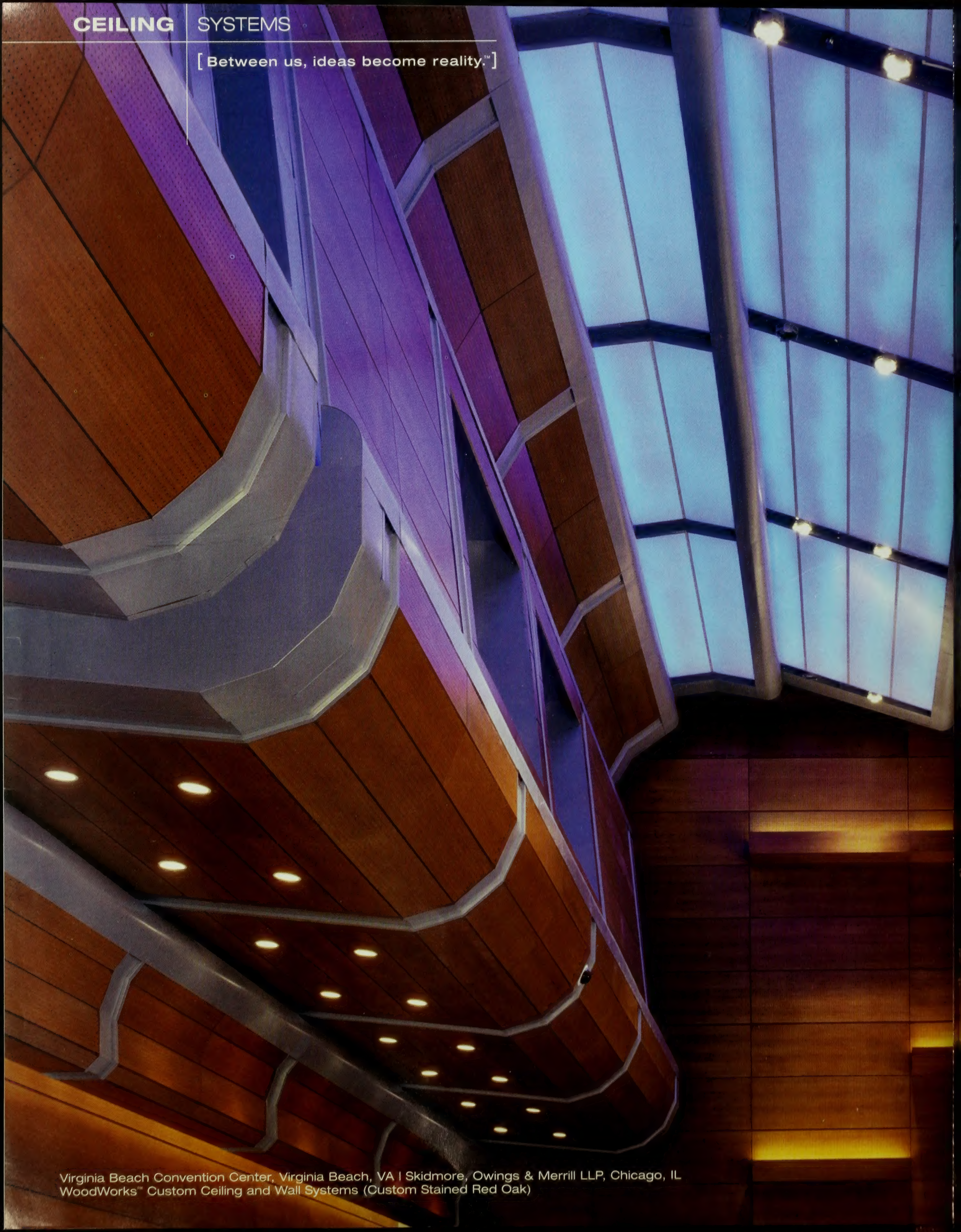

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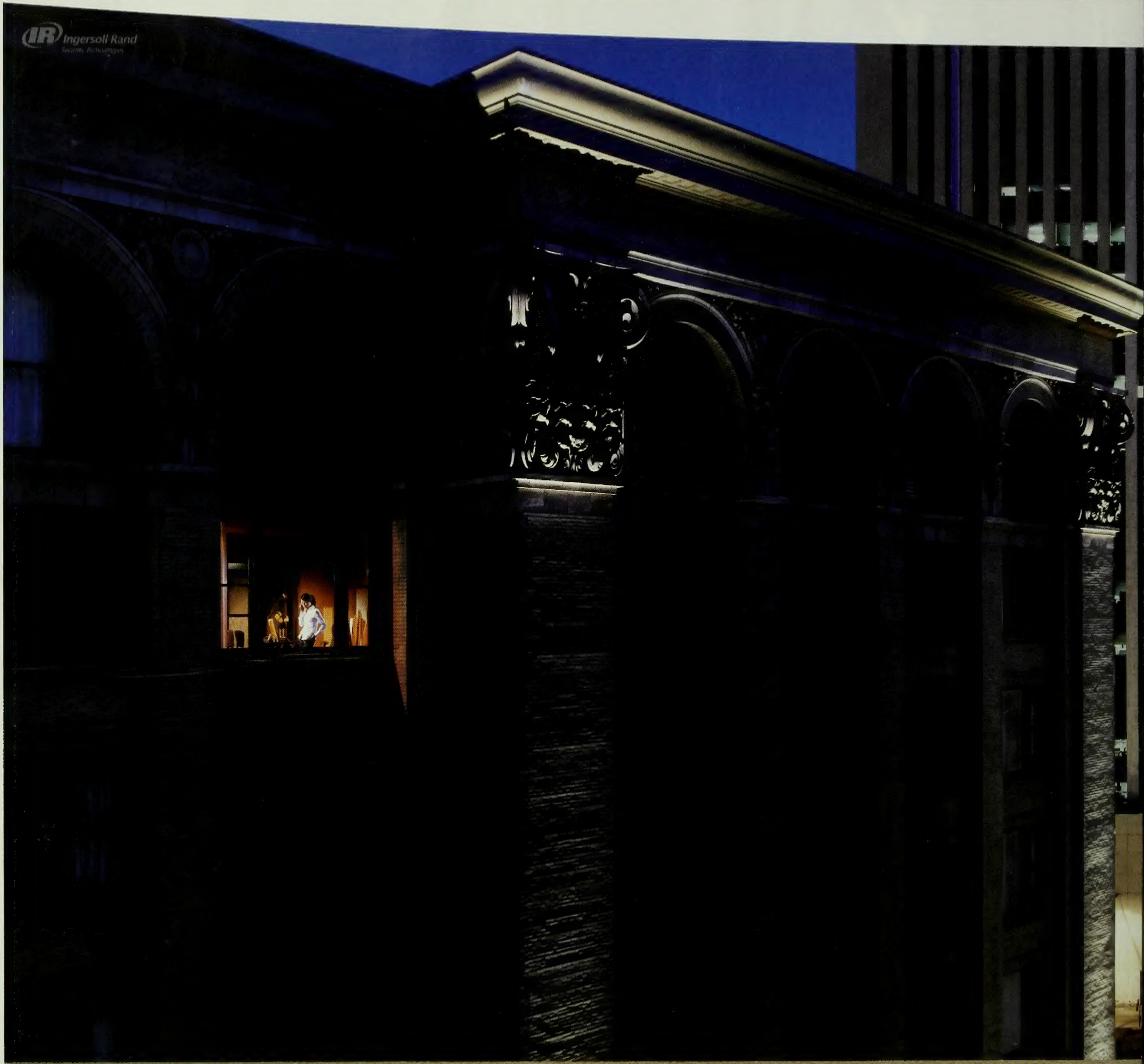

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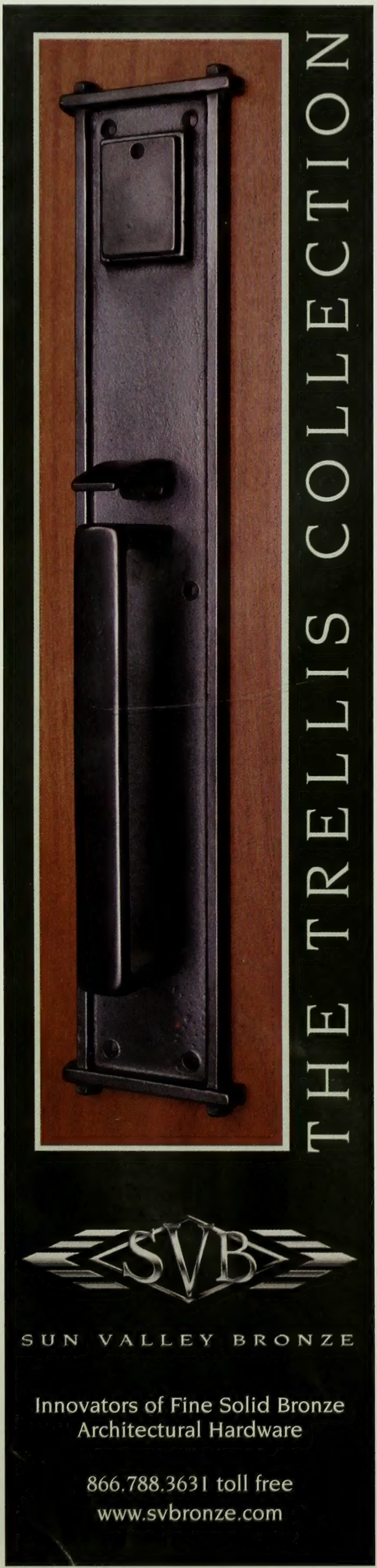

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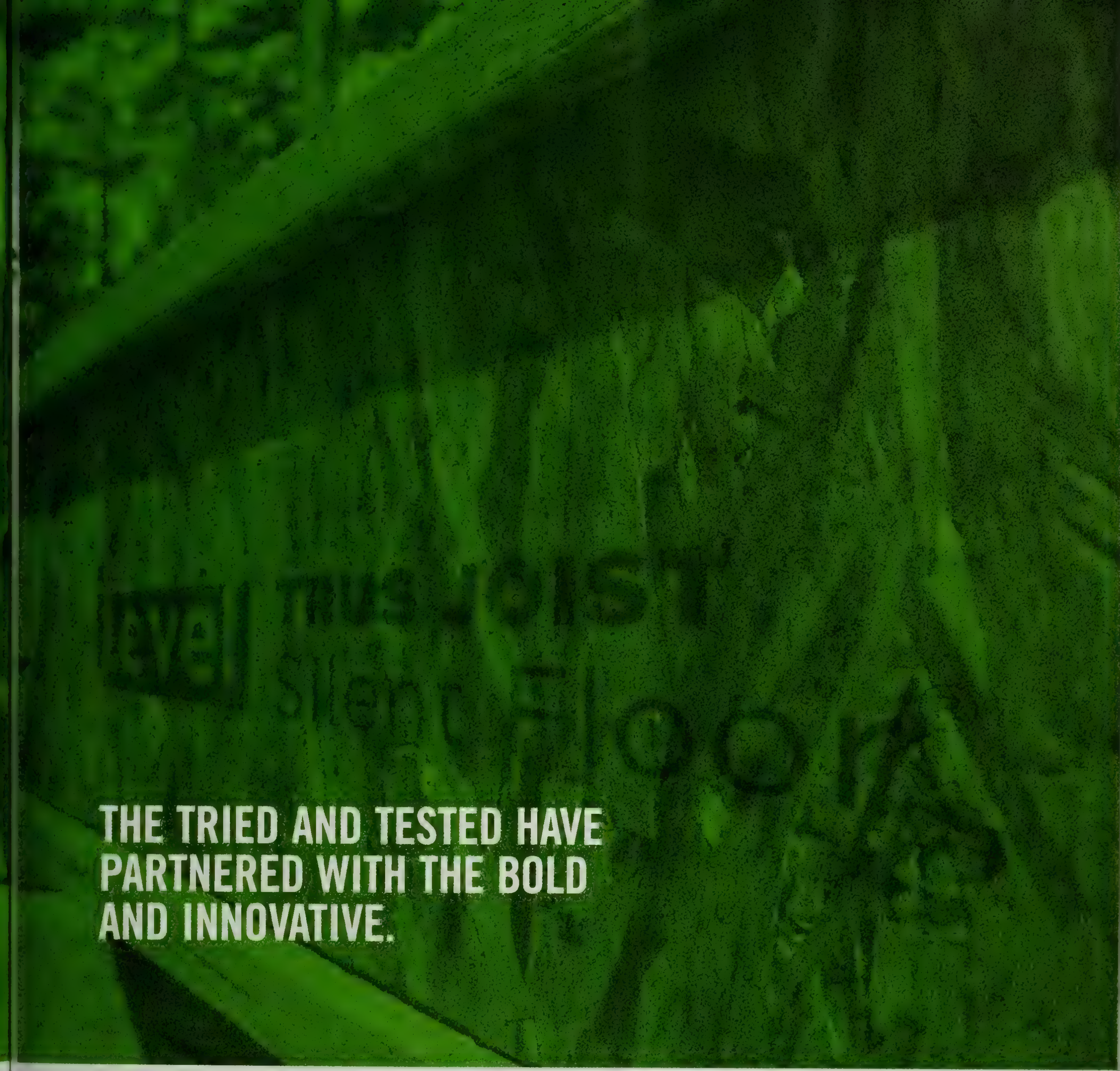

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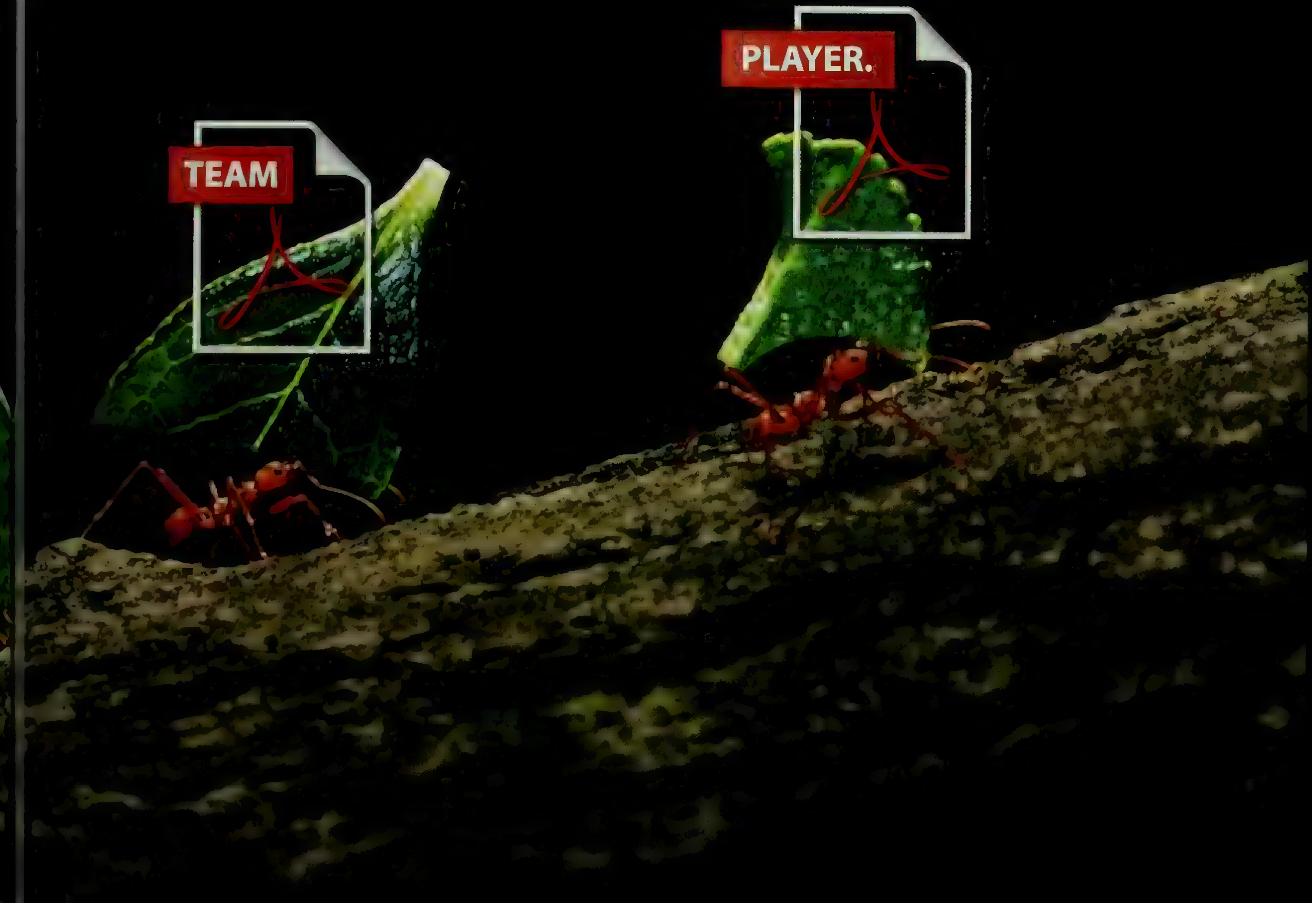

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House of The Month

Maximizing a small lot in Venice, California, Johnston Marklee Architects turned the design for the Sale House inside out to create an interiorized courtyard landscape. The house engages a historic building, Morphosis' 2-4-6-8 Studio, on the site, and uses colorful resins and a dynamic lighting scheme to animate the project.

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Lighting Special Section

With California's Title 24 regulating energy usage for newly constructed commercial and residential buildings, lighting designers and architects have to be more creative than ever. Three lighting projects in Los Angeles illuminate how challenges can inspire ingenuity without sacrificing aesthetics or program.

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Pasadena Hillside

Editorial

By Robert Ivy, FAIA

For architects and for architectural historians, critical lessons reside in the tangible. In examining the transition from the Roman basilica to the domed Byzantine cathedral, we literally see and can trace the intellectual, political, and philosophical transitions of empire; a telling detail, like Proust's taste of a petite Madeleine soaked in tea, can unlock a world of memory.

Pasadena, California, encompasses such a tectonic shift, visible not in the seismic record, but in two buildings. Each represents a distinctive moment in architectural history, summing up the motives of generations of designers, thinkers, and makers. Each lies within blocks of the other. Each asserts a radically opposed worldview, poised on opposite shoals of World War I—asserting an identity visibly, even tangibly, in its personal fabric and structure. A consideration of the two offers an essay on the quintessential differences between genius and craft, prompting us to consider them together.

The David and Mary Gamble House (1908), by Charles Sumner and Henry Mather Greene, represents a culmination, a hyper-refinement, of American domestic design. Set on the brow of Westmoreland Place, a residential street near Pasadena's Brookside Park, the Japanese-inflected Gamble House inculcates the traditions of the craft of wood joinery and of refinement in material and aesthetic choice that had evolved with the American house. For subsequent generations, the images of interlocking, rhythmic balusters along the steps counterpoised against naturalistic stained-glass windows have defined a kind of stylistic perfection.

Down the hill, however, on a challenging lot on Prospect Circle, a new world emerges. Frank Lloyd Wright's house for Mrs. G.M. Millard, called La Miniatura (1923), smolders with near-palpable energy, an essay in an entirely new language. Its name deceives. While it may be small, this, the first of Wright's textile block houses in Los Angeles, rises from a conceptually original system in which the architect interlaced patterned modular concrete units into a three-dimensional, cubic construction that modeled space in unfamiliar, transcendent ways. Compared to the Gamble House, we have jumped through the looking glass.

How do they differ? Whereas the Gamble House crowns a hill in a conventional way, open to Mrs. Gamble's beloved rose garden and directly visible to the street, La Miniatura nestles into a hitherto unbuildable lot, transformed into a naturalistic Eden. The floor plan and the sections at the Gamble House follow familiar room arrangements, from the central hall to the artful arrangement of living, dining, and servant spaces. At the Millard House, plan and section are indissolubly related, in which low passageways or places for human intimacy explode into heroic living spaces. Power seems contained, locked up, in the material, while the Gamble House allows space to bleed through artful portals.

Both are characterized by their peculiar reactions to California light and air. Up the hill, the Greene brothers allowed a bidirectional flow, inviting prescribed axial encounters with street and garden; the formality inheres in the geometry. At La Miniatura, as critic Martin Filler has asserted, chiaroscuro compounds the effect. Light and shadow create a near-symphonic interplay, both within the building and outside in the ravine garden, animating the spatial composition and filtering across the structural fabric of the house. In describing his method of building, Wright referred to his own craft in the textile as "weaving," or as historian William Allin Storrer asserts, "knitting" together concrete and steel.

While generations of students of architecture have cut their teeth on the gorgeous imagery that surrounds both buildings, pouring over picture books and, later, Web sites, one fundamental truth emerges: No two-dimensional representation can capture the essence of either project. Compared on the printed page, both seem equally compelling, though differentiated by architectural language. In one brief encounter on a day in Pasadena, California, however, the 20th century speaks eloquently. For those few able to inhabit these structures, no choice is demanded: Through them you can hear a century speak.

Robert Ivy

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Letters

All that glitters is not gold

Your articles about the development in Dubai have been fascinating and astounding [From the Field, www.archrecord.com, December 12, 2005, and "Dubai Rises," RECORD, February 2006, page 60]. I am glad that someone has finally shown the extent of construction projects there. However, a follow-up article should explain some of the downside of this development. Photos showed beautiful promenades, but devoid of people. A recent article in *The New York Times*, "Dubai Dream Dims for Asians," describes the extremely grim conditions of the immigrant construction workers (who make up a large percentage of the population). It warns of imminent, and real, labor riot danger for all this grandiose construction.

It is a very sad state of affairs. I am curious about the quality of the construction. It can't be good—behind the gold and marble, that is.

David Christensen, AIA, LEED, AP
Bellingham, Wash.

Whether the weather

Regarding Robert Ivy's April editorial ["Lightning Strike," page 21], I found it surprising that both you and your vigilante acquaintance selected England as an example of a place with benign weather.

Not to interfere with your overall point, but weren't half the trees ripped out of Kew Gardens and many other beautiful garden areas of the U.K. in a massive storm not many years ago? In grad design school, we always used Malta as an example of a site in which weather was not going to be an issue in a design studio project. Now I fear that before long, extreme weather will be a very serious issue in very many places, one to be faced by architects as well as by every dweller on this planet.

Caroline Hancock, Assoc. AIA
Princeton, N.J.

Building blocks for the future

The beach house designed by Javier Artadi located in the Atacama Desert of Peru, and featured in your Record Houses issue [April 2006, page 86], seems almost to float above the ground. The carved-out volumes frame different views and define the oceanfront facade. The play on solid and void evokes a feeling of lightness. Kudos to the designer for resisting the design restrictions that stipulated that the facade could only be wood. Concrete and terrazzo definitely seem like a better solution for an arid climate. The house—designed for a family—has clean-edged, open spaces which allow children to play in an unencumbered environment. The forms may be simplistic, Minimal, white concrete boxes, but the feeling that is evoked will create memories for a family that can last a lifetime.

Adrienne Batson-Cooper, Assoc. AIA
Brooklyn, N.Y.

Modern thinking

As an architect who practices primarily within the residential area of our profession, I feel compelled to voice my deep disappointment in the projects chosen to compile Record

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Letters

Houses 2006. My displeasure does not stem from any particular project covered in the issue. On the contrary, each home portrayed is intriguing and worthy of note. My objection is to the collection of homes itself. I simply cannot see how this group of eight houses can be considered a diverse representation of quality, modern residential architecture.

Can a modern home have a sloped roof? Clapboard siding? Can a modern design use traditional materials in innovative ways and still be noteworthy? Is it modern to use stone or brick that demand fresh ways of thinking or inventive processes of construction? Apparently not, according to Record Houses 2006. The issue has labeled what the "modern house" looks like through the eyes of ARCHITECTURAL RECORD: It has a flat roof and cubist form. By locking an image of what a contemporary or noteworthy residential architectural project should be, the magazine is contradicting the varied and innovative work that forms the basic theory of what modern residential architecture is today.

Victor Thomas, AIA
Via e-mail

Houses not for living

The houses from the April 2006 issue are simply exquisite—at least as far as the detailing goes. But there's more to life than joints. The photos depict volumes and partitions and shiny finishes that are devoid of any feeling, life, or passion. Nobody can live in these houses, because they do not support a "normal" lifestyle. People here do not eat, do not watch TV, do not read, do not have kids, do not read newspapers, do not answer phones, do not shower, do not brush teeth. I hate these interiors. I could not imagine living in one. This is what I thought 25 years ago when the first houses by Richard Meier and his kind of "architecture" were published, and this is what I think today, too.

Radu Ilioiu, R.A.
New York City

Non-numerical qualities of light

I read with interest your recent articles on environmentally friendly lighting, both in the schools Building Types Study [December 2005] and in a number of your continuing education pieces over recent months. As a practicing lighting designer, I recognize the importance of energy efficiency in lighting; however, both codes and the discussion, particularly regarding daylight, make little reference to how the user of the space experiences the light—the non-numerical aspects of lighting design.

An important focus of any lighting design discussion needs to be not just the quantity and efficiency of light, but the quality of both light and lighting—of the *experience*. The architect has a responsibility to consider the distribution of light first as an architectural consideration, and not simply to pass the problem off to an engineer who will design as code mandates. Similarly, as the codes are revised, rigorous energy efficiency should be preserved and even tightened, but unnecessary clauses that simply limit quality of design should be studiously weeded out.

Thomas Paterson
Mexico City

Corrections:

For Fernau & Hartman's Eastside Center for the Arts [RECORD, December 2005, page 152], photographer Richard Barnes was not credited for his three photographs that were featured. The March feature on the Rural Studio ["Keeping the Spirit Alive by Moving Ahead," page 76] incorrectly named Robert McGlohn as engineer for the Perry Lakes Park bridge. The engineer was Joe Farruggia of GFGR Architects and Engineers, Chicago. McGlohn engineered the firehouse at Newbern.

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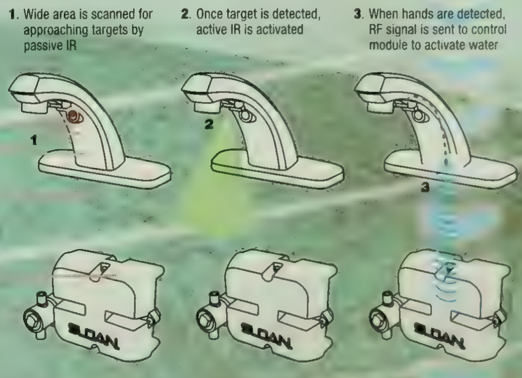
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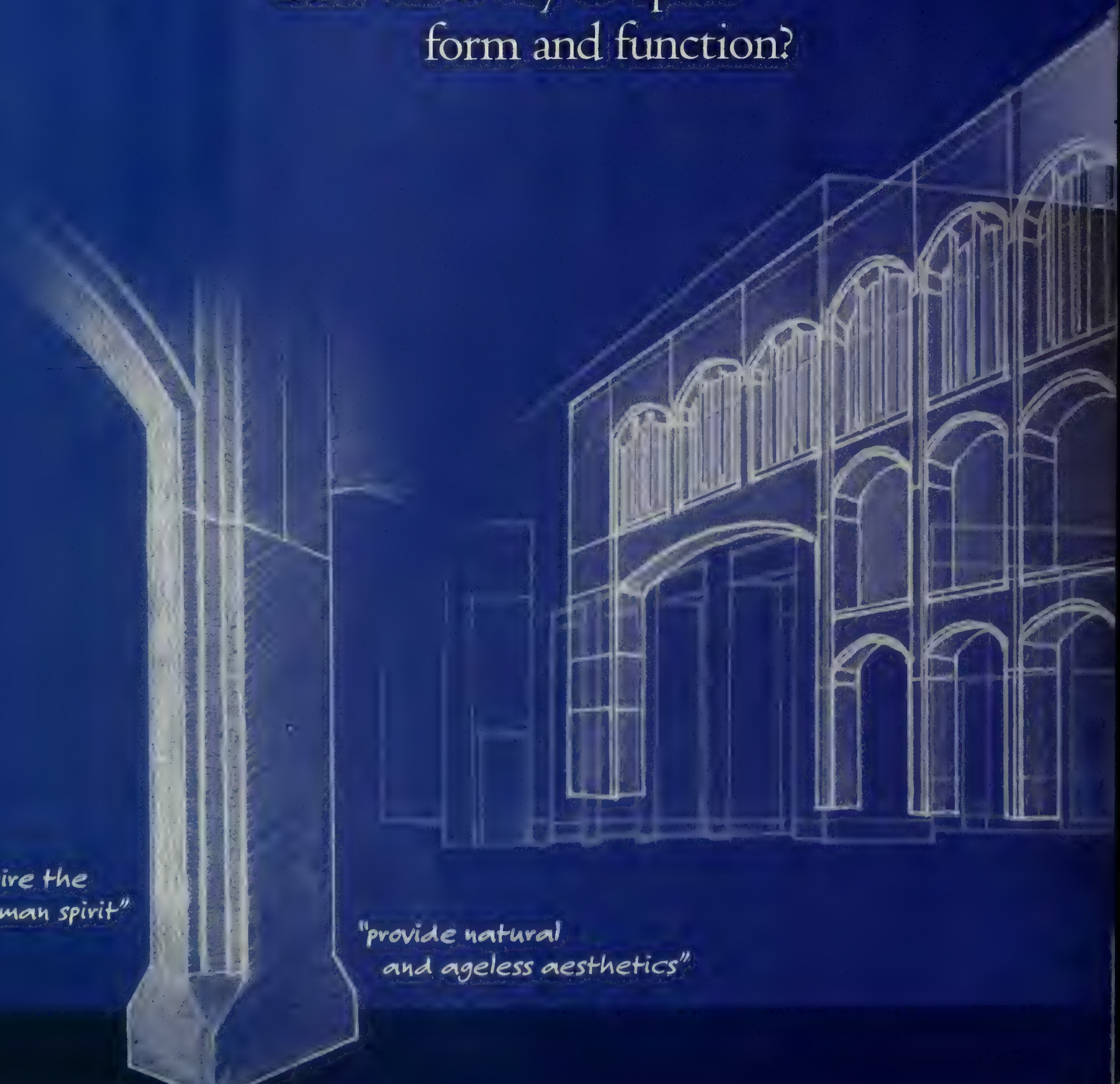

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Record News

Highlights

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p.30 **Foster, Gang designing new skyscrapers**
p.32 **FEMA releases Louisiana guidelines**
p.34 **Special Los Angeles report**

Paulo Mendes da Rocha wins Pritzker Prize

Brazilian architect Paulo Mendes da Rocha has been awarded the 2006 Pritzker Prize, the architecture profession's most prestigious accolade. The 77-year-old designer is the unofficial dean of the Paulista School of architecture, responsible for infusing the Brazilian variant of Brutalism with delicacy, flair, and technical elegance.

The Pritzker jury cited Mendes da Rocha for his "bold use of simple materials" and "deep understanding of the poetics of space." He is also recognized for the ethical dimension of his architecture, which attempts to make monumental buildings of concrete and steel feel accessible.

"Paulo Mendes da Rocha brings the joyful lilt of Brazil to his work, and in so doing lifts the spirits of all those whose lives are touched by it," added Lord Palumbo, the jury's chairman.

Impressive works

Perhaps the architect's most celebrated building is the Brazilian Museum of Sculpture, in São Paulo (1995), a complex of concrete plazas and partially buried galleries. Typical of his work, Mendes da Rocha alleviates the accumulated massiveness with a simple dramatic element: A slender, 196-foot-long concrete roof effortlessly spans the site without arching, supported only by small struts at either end.

The architect's first major project, the Paulistano Athletic Club (1958), was commissioned when he was just 28. He used steel cables to float a circular metal roof above a sports hall when he could just as easily have fused roof and supports into an inert, overbearing structure. For the Brazilian pavilion at the 1970 world exposition in Osaka, Japan, he balanced much of the building on a single point of terrain. And in his most recent major public project, in 2002, the architect suspended an enormous steel canopy over the Plaza of the Patriarch in São Paulo's downtown. Even at 40 tons the covering seems as light as a canvas sail [RECORD, December 2005, page 63).

The architect notes that such elegant solutions don't require technical wizardry. The roof at the sculpture museum was "like building an arbor," he says. "It's done all the time."

Nearly all of Mendes da Rocha's work can be found in his home of São Paulo, including the renovation of the São Paulo State Art Museum (1999) and the Forma furniture store (1987). He is currently planning the expansion of a university in Vigo, Spain.

Little-known outside Brazil

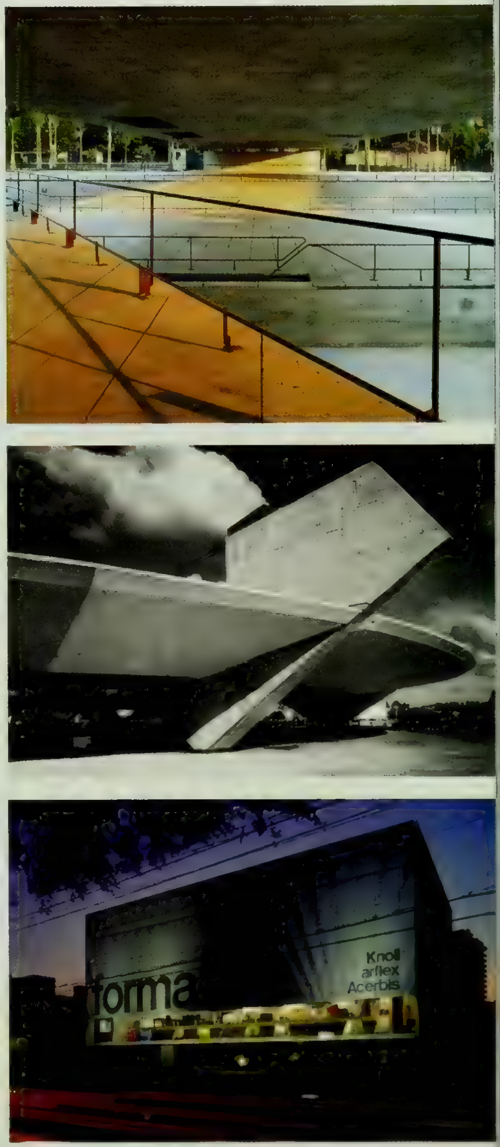
Mendes da Rocha says he was surprised by the Pritzker award. He is not as well-known around the world as many of his Pritzker predecessors, perhaps because his work is confined almost exclusively to São Paulo. Yet he is the leading figure of that city's distinctive architectural tradition, which began with his mentor, João Batista Vilanova Artigas. The Paulista School was marked initially by Marxist political convictions, technical vigor, and a passion for rough-formed concrete. The architecture itself seemed particularly well-suited to a rough-formed, chaotic megacity like São Paulo, and it would represent an ongoing argument against the formal excesses exemplified by Brasília. "The idea is not to make objects, but to transform places," says Fernando de Mello Franco, an architect with MMBB, a firm that frequently works with Mendes da Rocha.

Ruth Verde Zein, a professor of architecture at Brazil's Mackenzie University, says the award may finally shift the critical spotlight away from Rio de Janeiro's famous resident architect. "The whole world thinks that Brazilian architecture is just Oscar Niemeyer," she says. "Niemeyer is the tip of the iceberg. Many people don't know there is another Brazilian avant-garde, here in São Paulo."

Political difficulties

Mendes da Rocha's career was not without turmoil. In the late 1960s, during Brazil's military rule, he and his colleagues at the University of São Paulo were forced to resign because of their left-wing politics. He was reinstated in 1980, and the Paulista tradition carried on, with Mendes da Rocha at its center. He continued to teach at the university until his retirement in 1999, and he frequently collaborates with his former students on art gallery and retail projects. Besides himself, his office includes one secretary, and houses a library. Within a short walk are most of the offices of the Paulista community.

This year's award, which comes with a $100,000 grant and a bronze medallion, will be presented in Istanbul at the end of May. Mendes da Rocha is the third Latin American to win the award, and the second Brazilian. Niemeyer received the Pritzker in 1988. The Pritzker Prize was established by the Chicago-based Hyatt Foundation in 1979.
David S. Morton



Mendes da Rocha's Brazilian Museum of Sculpture (top); the Paulistano Athletic Club (middle); the Forma store (above).

Lincoln Center plan gains board approval

Diller Scofidio + Renfro and FX Fowle's plans to transform much of New York City's Lincoln Center were formally approved at a board meeting of the Lincoln Center Development Project (LCDP) on March 13. Preliminary construction began the same week.

The scheme, which involves refashioning existing buildings, streets, and landscaping along West 65th Street between Broadway and Amsterdam Avenues, will be the first major set of changes to the complex since it was built in the 1960s. Plans include creating more contemporary and transparent facades for buildings along the street, rehabilitating most interiors, and adding dramatic lighting elements such as LED light "mats" set into 65th Street. The project also calls for narrowing 65th Street and adding a slender transparent bridge over the street, creating a new sloping "campus green" and restaurant at the complex's North Plaza, and expanding and resurfacing the North Plaza's reflecting pool.

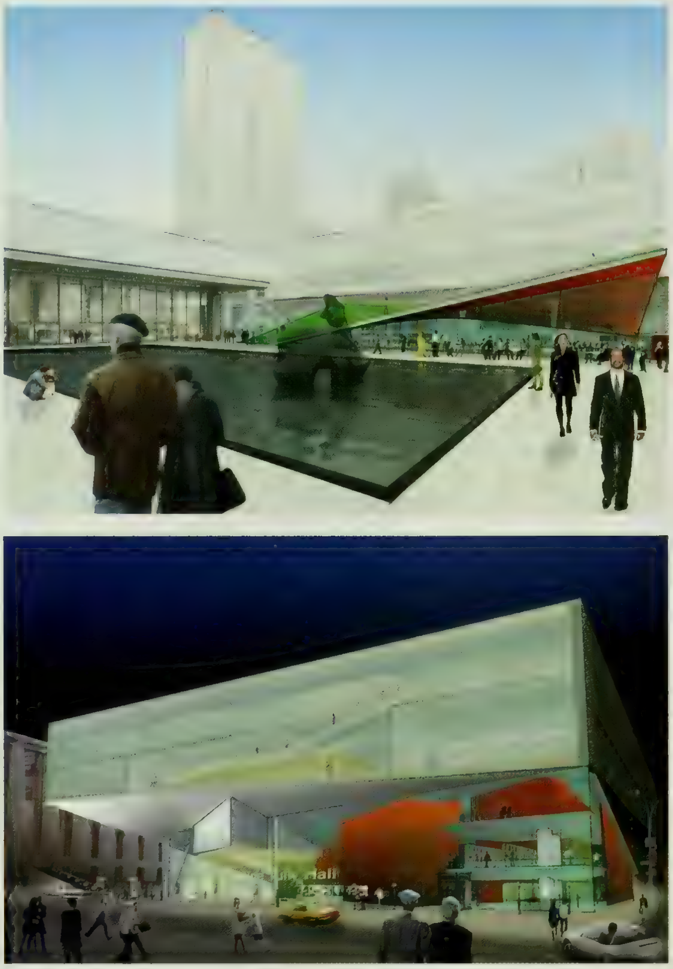
Preservationists have complained about changes to the North Court, which was designed by landscape architect Dan Kiley. Lincoln Center is still in conversation with preservationists on this issue, says Betsy Vorce, a spokesperson for Lincoln Center.

Otherwise, Vorce says the plan is essentially the same as what was unveiled to the public in April 2004 [RECORD, May 2004, page 28], except for a few minor "refinements," most of them not visible to the public.

Institutions along 65th street include The Chamber Music Society of Lincoln Center, The Film Society of Lincoln Center, administrative offices for Lincoln Center for the Performing Arts, the School of American Ballet, The Juilliard School, Lincoln Center Theater, and the New York Public Library for the Performing Arts.

The changes, say Lincoln Center, will not only update the site's aesthetics and encourage pedestrian activity, but they will improve pedestrian and traffic safety, open the street to light and air, and expand The Juilliard School, The Film Society of Lincoln Center, Alice Tully Hall, and the School of American Ballet.

Construction on the $500 million project is scheduled to be completed in 2009. Fund-raising is still ongoing, says Vorce. *Sam Lubell*



The plan calls for a sloping "campus green" north of Lincoln Center's North Court (top), and for new building facades, such as Alice Tully Hall's (bottom).

Ground Zero development stalled by lease issues

The fate of development at Ground Zero hangs in the balance as developer Larry Silverstein and the Port Authority (PA) of New York and New Jersey attempt to renegotiate Silverstein's lease of the twin towers.

New York Governor George Pataki had set a March 14 deadline for the parties to resolve the lease contract, but state officials walked out of talks just before the deadline. Silverstein submitted a new offer on March 17, but no agreement had been reached at press time.

A spokesperson for Silverstein told RECORD in early April that the developer had offered to give up the rights to the Freedom Tower, which he would still build, and to Tower 5 of the new World Trade Center development, and that he would also give up 38 percent of the $2.9 billion in insurance proceeds that he is expected to collect. The spokesperson said Silverstein would give up hundreds of millions of dollars in state liberty bonds, as well, but would not specify the exact amount. Finally, Silverstein has offered to pay for all infrastructure costs related to his firm's development.

Silverstein's spokesperson said that his party had reached an agreement with New York's PA leaders, but not with New Jersey's (the PA's commissioners are appointed in equal number by New York and New Jersey's governors). PA spokesperson John McCarthy acknowledged that "people here have a difference on what a financially viable deal is." New York and New Jersey's political leaders have met to try to resolve the differences.

The PA and New York Mayor Michael Bloomberg have said that Silverstein is putting his financial interests over the public's need to rebuild the site. McCarthy says that the conversation with Silverstein is ongoing, and that the framework for an agreement is still coming together.

Silverstein obtained the lease to the Twin Towers from the PA just a few months before September 11. His rent is expected to climb from $107 million to $125 million a year this July. A recently released city report claimed that Silverstein will likely run out of money and default on his lease after building only two out of Ground Zero's five planned towers. Silverstein's office has called the analysis "misleading and at times outright wrong."

It has now been almost five years since 9/11, and construction is still barely under way at Ground Zero. Many speculate that the conflict will soon end up in court. *S.L.*

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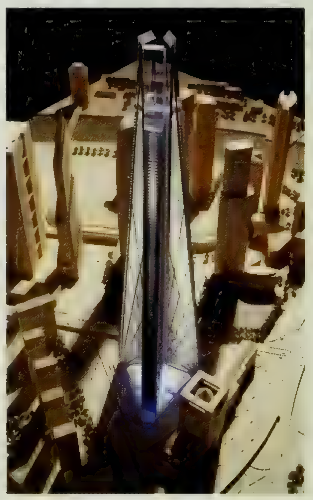
Foster designing Europe's tallest skyscraper, in Moscow



A model of Foster's Moscow tower.

Weeks after winning a competition to redevelop New Holland Island in St. Petersburg, Russia, Foster and Partners was chosen to design a mixed-use tower in Moscow that is slated to become the tallest building in Europe. It will surpass the Federation Towers, currently under construction in Moscow, whose height reaches 1,425 feet.

The selection in mid-March, by Moscow Mayor Yuri Luzhkov, completes a lengthy process to choose the building that will become the centerpiece of Moscow City, the Russian capital's budding business district. The city's public advisory council was at press time scheduled to consider the project in late April, but seemed unlikely to provide serious opposition.

Firm principal Norman Foster, who is working for Shalva Chigirinsky, the same developer who partnered with him in St. Petersburg, presented three alternative designs for what is to be known as the Rossiya (Russia) Tower. The mayor chose a high-rise that will reach almost 2,000 feet. The tower's slender volume will narrow toward the top, consisting of a tripartite structure joined around a spine. Its 118 floors will enclose a total area of more than 5.5 million square feet. An observation deck will be positioned at the top, while the uppermost floors will be designated for residential and hotel use. The lower floors will be used for office and retail space.

The tower will be equipped with a system of natural ventilation, harnessing rainwater and snow while maximizing environmental recycling. The grounds will also contain a public ice rink and underground parking.

According to Chigirinsky, the project's estimated cost is $1.5 billion, with a planned completion date of 2010–11. At the end of 2004, the developer and his company won a bid to redevelop the site of the Rossiya Hotel in the immediate vicinity of Red Square, a mammoth structure that is presently being dismantled. Reportedly, he has engaged Foster to be the lead designer of that project as well. *Paul Abelsky*

Studio/Gang unveils rippling skyscraper

A rendering of Gang's Aqua tower in Chicago.

Chicago-based Studio/Gang/Architects has released its initial designs for Aqua, an 83-story residential and hotel tower just south of the Chicago River. The building will be located in the city's new 28-acre Lakeshore East Development, south of the Chicago River and east of the Loop.

Firm principal Jeanne Gang will create rippling edges in the concrete-framed structure's facade by using a unique floor plate for each of its concrete slabs. The undulating exterior spaces, which Gang conceived as terraces rather than individual balconies, give each apartment and hotel unit its own outdoor space.

Loewenberg Architects is the architect of record for the $300 million project. The developers are Magellan Development Group and Near North Properties.

The 1.9-million-square-foot building will be located a few hundred yards west of Santiago Calatrava, FAIA's planned Fordham Tower, which received planning-commission approval earlier this month. It will also contain the hotel, a health club, conference facilities, restaurants, and retail. Its two-story podium will be topped with a green roof.

Drawings for Aqua will soon be submitted for building permits, with completion expected in 2009. It will be Studio/Gang's largest project to date. Its most noted previous projects are the Starlight Theatre in Rockford, Illinois, and the Chinese American Community Center in Chicago. *Edward Keegan*

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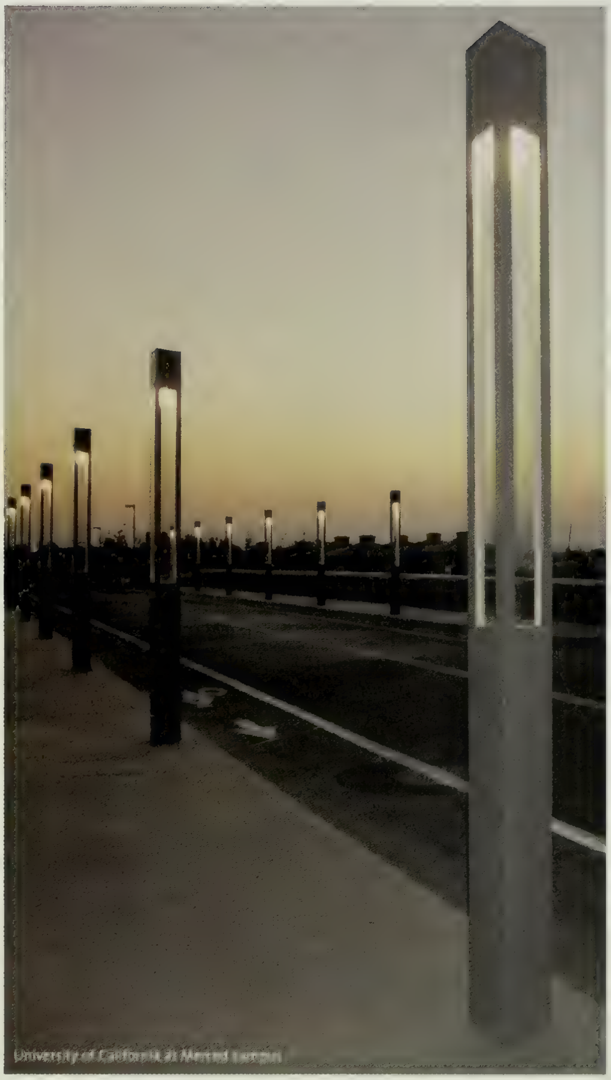

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SPECIAL HURRICANE REPORT

FEMA releases flood elevation guidelines

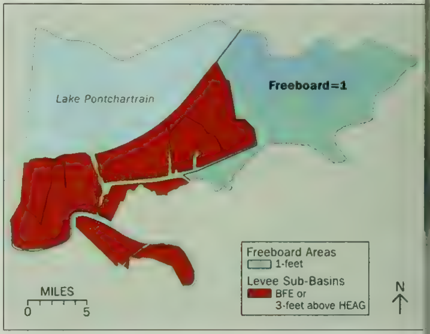
On April 12, FEMA released its flood elevation guidelines for levee-protected areas of Louisiana—including much of New Orleans—which could determine the fate of thousands of new and existing buildings. The results call for raising new and hurricane-damaged structures in these areas 3 feet above their sites' highest adjacent ground elevations, a lower elevation than many building owners had expected. The guidelines were supposed to be issued in January, and delays had frustrated residents and communities who wanted to move forward quickly with rebuilding.

The guidelines, compiled by FEMA-funded scientists and engineers, advise communities in the Louisiana parishes of Orleans, Jefferson, St. Bernard, and Plaquemines—all in the southeastern section of the state—about the elevations considered safe for rebuilding. In producing the guidelines, experts considered current and planned levee conditions, past hurricane seasons, and erosion and sinking of coastal land in the area.

The new FEMA guidelines do not, officials point out, affect insurance rates or the availability of federal funding. The area's preliminary Flood Insurance Rate Maps (FIRMs), which will be released by FEMA in several months, should determine insurance rates. But the new data will be an important safety recommendation for communities, as well as serve as a prime indicator of future regulations. In a few weeks, FEMA will unveil its flood elevation maps, putting the information in visual form.

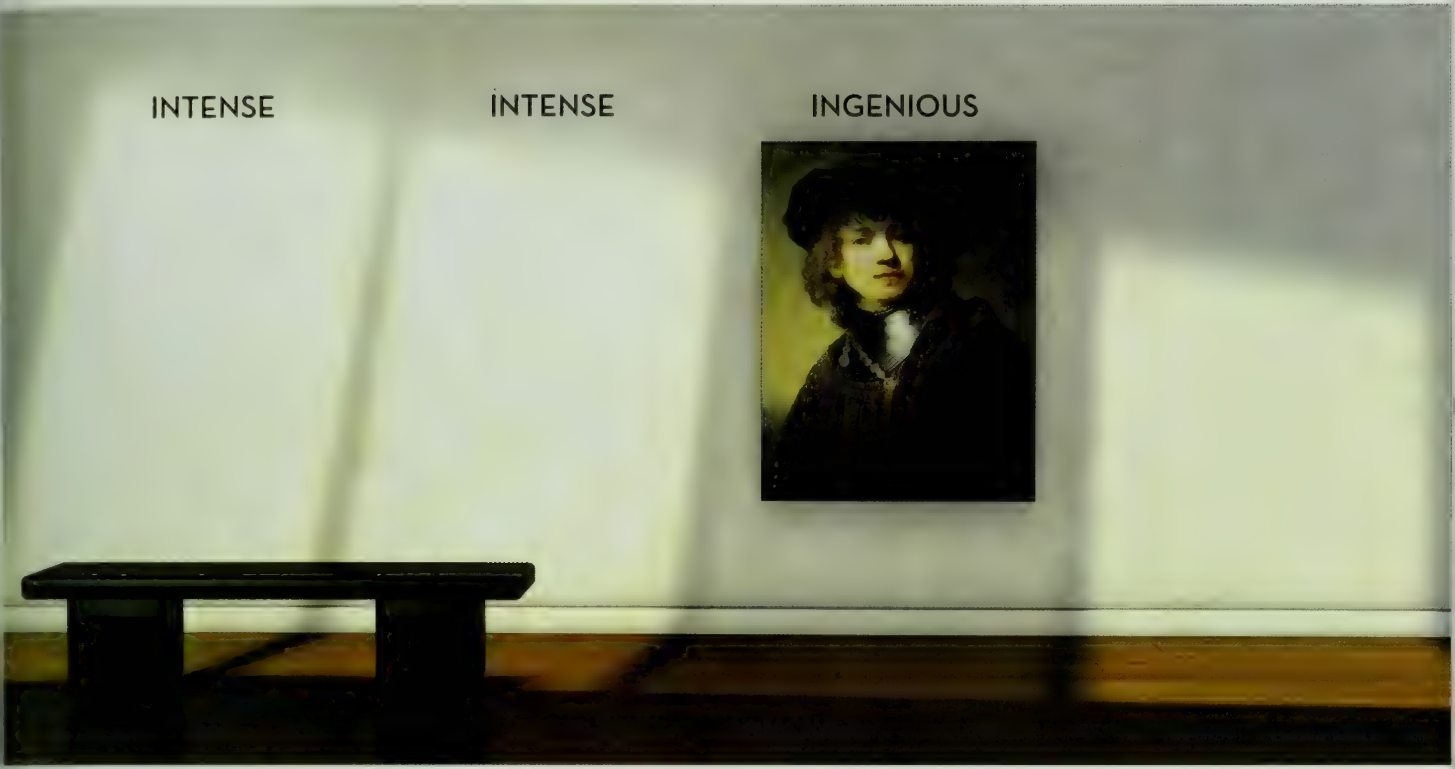
"Ultimately, it is state and local officials, working with their citizens, who make final decisions on land use and other building code requirements," stated David Maurstad, FEMA's Mitigation Division Director.

Most residents and officials seem relieved that homes and buildings do not have to be raised much higher, which would make rebuilding difficult. "The good news is, it's not a dramatic elevation," said Donald Powell, the Federal coordinator of coastal rebuilding. FEMA spokesperson Butch Kinerney says that FEMA-based elevations rest on the assumption that levees will be brought up to the highest safety standards, which will cost, according to Powell, $6 billion more than the $3.5 billion that Congress has thus far appropriated. Reconstruction would probably take at least four years. Some residents and experts, however, fear that the 3-foot elevation is too low and may leave many buildings vulnerable to future flooding.



Levee-protected areas of Orleans Parish (in red).

The elevation guidelines' delay, says Kinerney, resulted mostly from the time it took the Army Corps of Engineers to test the effectiveness of the area's levee systems. The labor-intensive process was further complicated by the myriad local agencies in charge of levee management in the state. FEMA was also hoping that Congress might allocate more funds toward strengthening the levees. *S.L.*



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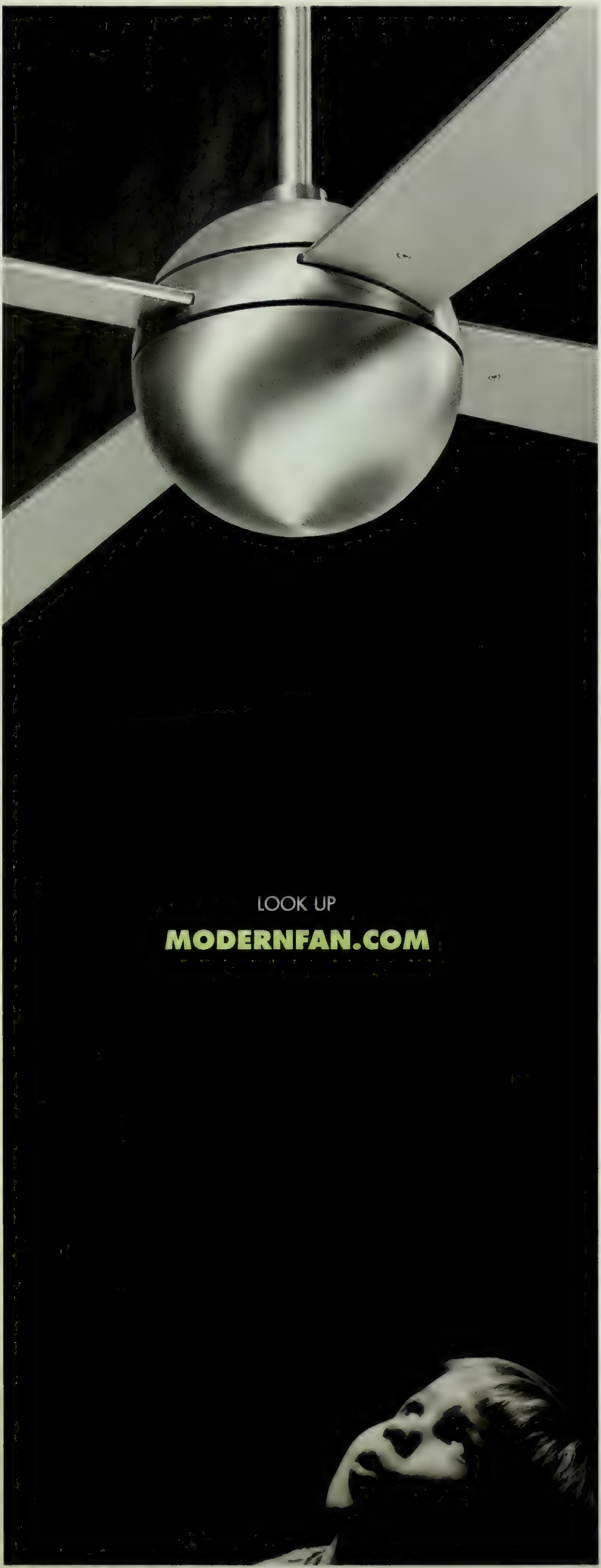

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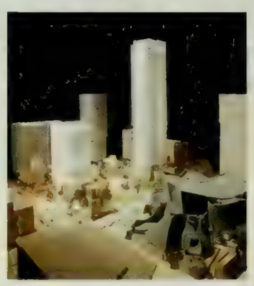
In Los Angeles, Downtown is a boomtown

Nowhere in Los Angeles is more construction under way than in and around its long-neglected downtown. A study conducted in February 2006 by the Los Angeles County Economic Development Corporation estimates that there has been $12.2 billion worth of built and planned construction here since 1999. Roughly $8.7 billion of that is for private projects, including more than 26,500 residential units, with $3.5 billion for cultural and civic works.

Approaching downtown from the freeway, the most visible construction site is AEG's L.A. Live! retail, residential, hotel, and entertainment development, next to the Staples Center. The project, master-planned by RTKL, includes nearly 3.8 million square feet of space, including a high-rise tower for ESPN. The 40,000-square-foot Nokia Plaza anchors the development.

Another huge downtown project is the $1.8 billion Grand Avenue plan, across from Frank Gehry, FAIA's Walt Disney Concert Hall. Developed by The Related Companies of California, it is set to include up to 3.2 million square feet of residential, hotel, retail, and park development along the street, which is also lined by commercial high-rises, the Museum of Contemporary Art, and the Dorothy Chandler Pavilion. AC Martin Partners is developing the master plan, and Gehry is designing much of the project, including two residential towers, which were unveiled on April 24.

Some have questioned Gehry's ability to undertake such a large, urban-scaled project, but Eli Broad, chair of the Grand Avenue Committee, says that Mayor Antonio Villaraigosa and the county's Board of Supervisors have been positive. "I think it's very complementary to Disney Hall," Broad says. Gehry's model will now go on public view, though the public's role in the process is unclear. Rios Clementi Hale Studios, which in 2003 completed improvements to Grand Avenue, is designing a $50 million park just to the north.



Latest Grand Avenue model.

Condos and lofts are everywhere. Blocks from the Staples Center is Johnson Fain Partners' recently completed Metropolitan Lofts, a 274-unit, eight-story, Modernist-style residential building with at least five new projects nearby. Historic properties are being snatched up thanks to the 1999 Adaptive Reuse Ordinance, which relaxed the city's regulations for restoring older buildings. Thomas P. Cox Architects—working on several Downtown projects—converted Shultze and Weaver's Renaissance-inspired Subway Terminal Building, constructed in 1925, into 277 luxury apartments, called Metro 417.

North of Union Station, Rios Clementi Hale just opened a new, 118,000-square-foot building fo the California Endowment's Center for Healthy Communities This organization raises money for groups serving underprivileged neighborhoods, which underscores downtown's homeless problem. Unfortunately, little of the new development here addresses that issue.

Russell Fortmeyer

Metropolitan lofts, by Johnson Fain.

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L.A. River plan inching slowly forward

The Los Angeles River runs 51 miles through the middle of the L.A. basin. It has been largely ignored since the U.S. Army Corps of Engineers channeled it in the 1930s, but it is finally being recognized as an important natural and economic resource.

Last June, a team was chosen by the L.A. City Council to create a master plan focused on a 32-mile stretch of the waterway that runs between the San Fernando Valley community of Canoga Park and the East L.A. community of Boyle Heights. [RECORD, June 2005, page 30]. The technical and engineering consultants are Tetra Tech, the urban design firms are Civitas, Wenk Associates, and HNTB Architecture, and the landscape architects are Mia Lehrer + Associates. Community outreach organizations include The Robert Group, Transportation and Land Use Collaborative of Southern California, and consultant Adan Ortega, Jr., while Urban Partners LLC and Asset Strategies are providing implementation services.

The river is now called a glorified drainage ditch.

The designers say the goals of the $3 million master plan, scheduled to be completed by next January, include developing an interconnected park system, including sports fields, parks, trails, greening along the banks, and enhanced areas for wildlife. Another aim is to reduce the volume and improve the quality of storm water entering the channel through natural filtration and retention. Finally, the plan aims to stimulate investment in communities along the river. By the end of the planning process, the consulting team will hand the city a 20-year management and development blueprint.

The team, along with the city's Department of Public Works, has held seven public meetings since October to discuss developments and hone design ideas. Based on community input the team has identified five ¼ mile "nodes," which will receive more focused efforts. The next meetings, to present the node concepts, are scheduled for June 2006.

Response from local officials and residents has been positive. But, once completed, the master plan's fate will be determined by the city, which will need to secure funding from state, federal, and private sources.

"We hope that the city will be bold and jump-start this process with public investment," says Mark Johnson, an urban planner with Civitas. Deborah Weintraub, AIA, the chief architect and deputy city engineer on the project, notes that besides design ideas, the master plan must also develop a framework for governance, zoning, and financing.

The designers have high hopes but are aware of huge challenges. Weintraub points out that existing infrastructure near the river, like highways and rail lines, may have to be moved. Mia Lehrer of Mia Lehrer + Associates points to the ways a revitalized river might act as a symbolic conduit, connecting L.A.'s diverse communities with shared spaces and a series of foot and bike paths. "This is a chance to bring the city together," she says. "It's also an alternative way to commute. Can you imagine people being able to ride to work along the river?" *Allison Milionis*

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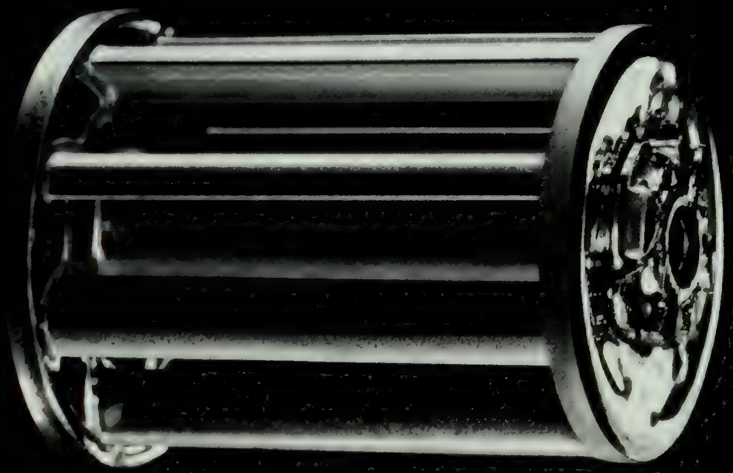

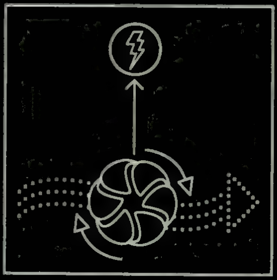

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Renovating L.A. mainstays

Kirk Douglas Theatre, Culver City Steven Ehrlich Architects transformed a faded movie theater into a 300-seat performing arts venue as part of Culer City's efforts to redevelop its downtown into a cultural hub. Traditionally home to film studios and postwar neighborhoods, Culver City has in the past decade seen the colonization of its industrial regions by architects, designers, and artists. Steven Ehrlich, AIA, whose office has been located there for eight years, says the theater has become the center of the area's redevelopment.

Ehrlich approached the project as an adaptive reuse, starting with the demolition of the entire interior down to the slab. The firm then poured new footings and inserted a new interior structure.

The former movie theater, built in 1947, was originally called the Culver Movie Palace. Its steeple and its large white neon *Culver* signage were restored, while a simple signage and graphics scheme was developed by L.A. firm Sussman/Prezja. Inside, the new theater includes seating galleries on each side to create intimacy, reinforced by the warm tones of the prefinished European plywood on most vertical surfaces. The Center Theatre Group, which operates two theaters at L.A.'s downtown Music Center, operates the theater.

Culver City's Kirk Douglas Theatre.

Farmer's Market, Mid-Wilshire When plans were announced in 2001 to develop the Grove, a new shopping center adjacent to the historic Los Angeles Farmer's Market, locals accustomed to the sprawling white ranch-house buildings of the original 1934 market were skeptical at best.

Fabric roof for part of the Farmer's Market.

To help the 32-acre market retain its original tone but relate to the larger scale of the Grove, Santa Monica–based Koning Eizenberg Architecture executed a $45 million master plan for renovations to the market. Developed for the Gilmore Company, owners of the market and the Grove, the plan includes the addition of a handful of buildings and other subtle interventions throughout the Market.

Firm principal Julie Eizenberg, AIA, says she especially values the effect that the old and new elements have on each other. "The essence of that place is that it had to stay casual and gritty."

The Farmer's Market, made up of small shops and restaurant stalls, has always been surrounded by parking lots, with no clear entries. Koning Eizenberg changed that by adding small additions to the perimeter like awnings, patios, and new buildings, made with materials such as wood, glass, and in one case, white Teflon-coated fabric. They also added a large structure along the northern edge of the site that has an oversize pop version of the market's original clocktower. *R.F.*

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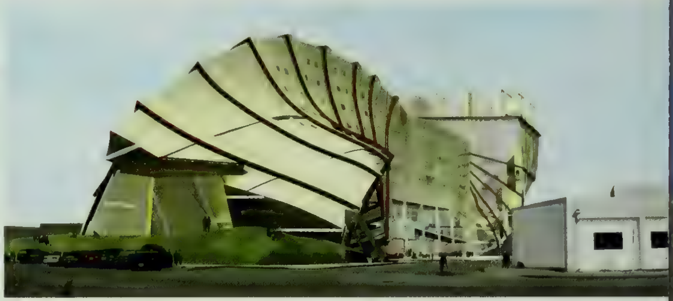
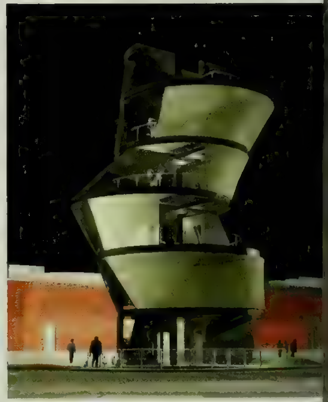


Moss creating two more experiments in Culver City



Conjunctive Points Theater Complex (top) and Gateway Arts Tower (bottom).

L.A. architect Eric Owen Moss, known for his unorthodox structures, says that the novelty of creating these projects has faded somewhat since technology gives most firms similar capabilities. Nevertheless, the architect is planning two very experimental projects in Culver City, California, that will anchor Hayden Tract, a local development with office, retail, and performing arts components. Moss has already designed several unusual buildings nearby, with names like Stealth, Beehive, The Box, Samitaur, and Umbrella.

The project that is furthest along is the Gateway Arts Tower, which will be a 72-foot-tall, 30-foot-wide building located at a prominent corner of the neighborhood. The steel-framed structure will mark the development and serve as a gathering space. The building will be made up of stacked, steel-framed, truncated cones, which cantilever from an armature. Each mesh-covered segment, slightly more than 10 feet high, will be backlit by projectors. The 1,486-square-foot building is expected to be complete by the end of this year.

The more ambitious project is the Conjunctive Points Theater Complex, a twisting building that will be located about three blocks south of the Gateway Tower. The mixed-use complex will hold three theaters, retail space, and public spaces, such as an amphitheater, a plaza, and a park.

The east end of the theater will be bent upward to accommodate a 750-seat theater-in-the-round and to take advantage of nearby views. The west end will gradually twist 90 degrees, accommodating a two-level, 1,650-seat thrust-stage theater, as well as the building's entrance. The 100-by-100-foot central portion of the building will contain five glass-enclosed retail blocks on the lower floors and office space above. Moss says the curving form will accommodate diverse programmatic components, give the space a natural acoustic sculpturing, and allow the building to be taller when facing downtown and less intrusive facing residential neighborhoods.

The building's twists will be created by concrete frames extended from a system supporting the subterranean garage levels. A secondar system of bent, steel-pipe frames wraps this structure, supporting the building's exterior surface. The projec should be completed by 2009. *S.L.*

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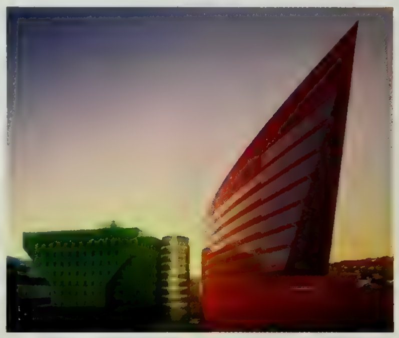


The Red Building (right) will join the Green Building (left).

Color coordination: Pelli unveils Red Building

On March 30, developer Charles S. Cohen and architect Cesar Pelli, FAIA, unveiled the third and final building for the Pacific Design Center (PDC) in West Hollywood, California. With 1.2 million square feet of space, including 130 showrooms, a theater, a conference center, and the Museum of Contemporary Art, the PDC is the region's largest venue for design products and events.

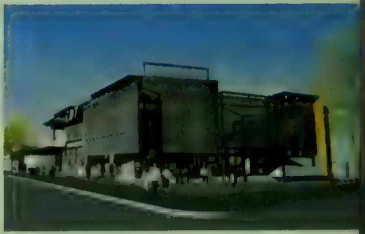
The new 400,000-square-foot, $100 million Red Building, named for its red, glass-clad facade, will comprise two slightly curved office towers—six and eight stories, respectively—sitting atop seven floors of parking. The towers will feature landscaped interior courts and showrooms that range from 14,000 to 36,000 square feet.

It's been 31 years since Pelli's Blue Whale building, the first of three structures planned for the PDC site, was completed. In 1988, the vaguely Y-shaped Green Building was finished, adding 450,000 square feet of showroom and office space.

The Red Building's executive architects will be Gruen Associates, and its landscape architects will be Thomas Balsley Associates. The building is set to break ground in 2007 and open in 2009. *A.M.*

A city hall away from the city

L.A.-based RoTo Architects is designing a "neighborhood city hall" for Pacoima, California, a small community northwest of downtown Los Angeles. The building is one of a growing number of buildings that are not official city halls, but home bases for city councilpeople and increasingly active neighborhood councils. The structures are especially popular in sprawling locations like Los Angeles, where city halls can be many miles away.



The $15 million project, a steel, stucco, and glass box with varied exterior metal shading screens, will be located in the predominantly hispanic area's downtown. The firm is also designing a plaza in front of the building with a large inlaid map of the city and a large screen for public movie viewings.

The project will contain a citizens' hall, meeting rooms, city council representatives' offices, and redevelopment and building-safety agencies. Commercial space will be located on the first floor. The structure will also have a large, second-floor outdoor deck called the *palco* (Spanish for skybox), designed mostly for assembly spillover and for watching the town's parades, says firm partner Michael Rotondi, FAIA. *S.L.*

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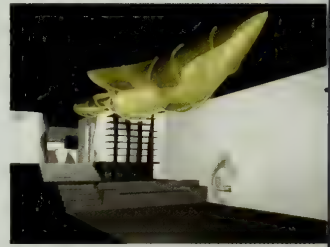
Lynn's Bloom House has surprises inside

Los Angeles architect Greg Lynn, known for experiments with computer-generated forms, is developing his first residential project. At first glance, the 4,200-square-foot Bloom House, at an undisclosed location in Southern California, looks like a simple stucco box, with an open first floor that steps upward at regular intervals. But its interior will have curvilinear surfaces emerging from its ceilings, walls, and almost everywhere else.

"I'm interested in taking the traditional zoning envelope and eroding it from the inside," says Lynn.

A long, rounded translucent fiberglass chandelier will extend across the length of the first floor. The office, kitchen, upstairs hallway, and first floor will have plywood framing covered in curved plaster. Walls in the curvaceous master bedroom and bathroom will be shaped with thermoformed Corian. The house will have curved wood-framed windows and a kitchen island whose base swoops down toward the floor.

Lynn says such contours are not "gratuitous shape making," but help create spaces that are very open but have little nooks for privacy and quiet. "It's trying to take advantage of every square inch of the house," he says. The project is expected to be completed by fall 2007. *S.L.*



The extended, warped chandelier.

A Modernist prefab model catches on

Prefab's popularity has helped Living Homes.

SCI-Arc founder Ray Kappe, FAIA, who has been practicing in Los Angeles since the 1950s, has tried for years to introduce a new style of prefabricated, modular home into the local market. His idea is finally starting to take off in California.

A Santa Monica–based company called Living Homes is producing his line of Modernist-styled prefab homes. The 2,500-to-6,000-square-foot, steel-framed dwellings, which will be installed as a series of modules, will be clad with glass and either cedar, concrete, or stone. Home construction takes about three months, says Kappe. He adds that the structures, which employ subtle level changes and various intersecting planes, are somewhat reminiscent of his work from the 1970s.

"I've always been interested in how to build something that doesn't feel like you're walking into a box," he says. But these homes are far more environmentally friendly than his earlier work. They will come with installed photovoltaics, green roofs, and radiant heating, and will be assembled using recycled wood and nontoxic paints.

Kappe has designed six of the homes, in Santa Monica, Venice, and Brentwood, and will likely develop 40 more for an affordable housing development in Santa Barbara. Costs range from $350,000 to $650,000, quite affordable by California standards. Living Homes plans to hire more architects for its future projects. *S.L.*

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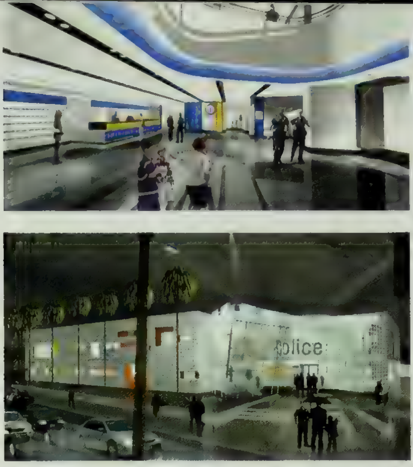
L.A.'s kinder, gentler police stations

In March 2002, Los Angeles voters passed the Citywide Public Safety Bond, also called Proposition Q, a $600 million fund for the upgrade, expansion, and construction of 13 police, fire, and bomb-squad facilities. The seven-year expansion program is actually one year ahead of schedule: All of the projects are expected to be completed by 2008.

The city hosted more than 50 public meetings to discuss the new projects, which needed to meet police- and fire-department safety and efficiency standards. Officials learned that residents wanted most of all to avoid the fortresslike aesthetic of the city's existing facilities. The Los Angeles Police Department (LAPD), which has a reputation for keeping citizens at arm's length, also wanted to establish connections to local neighborhoods. Most projects will have community rooms and open lobbies; some will have small parks or plazas. Facilities are also required to meet design standards set by the L.A. Cultural Affairs Commission, to receive a minimum LEED Certified rating, and to incorporate public art.

"We're giving something back to the neighborhoods," says Nick Seierup, principal at Perkins & Will. The firm included public gardens at both of its projects, the Harbor Area Station in San Pedro and the Rampart Area Station Downtown. The Rampart station comprises a series of horizontal masses and planes that extend into its site, referencing the area's Art Deco and Moderne architecture. A stone-clad wall slices through the building, forming a vertical counterpoint that separates public and high-security areas. Ribbon clerestories, light shelves, and skylights at each entry allow natural light to reach into the building's interior.

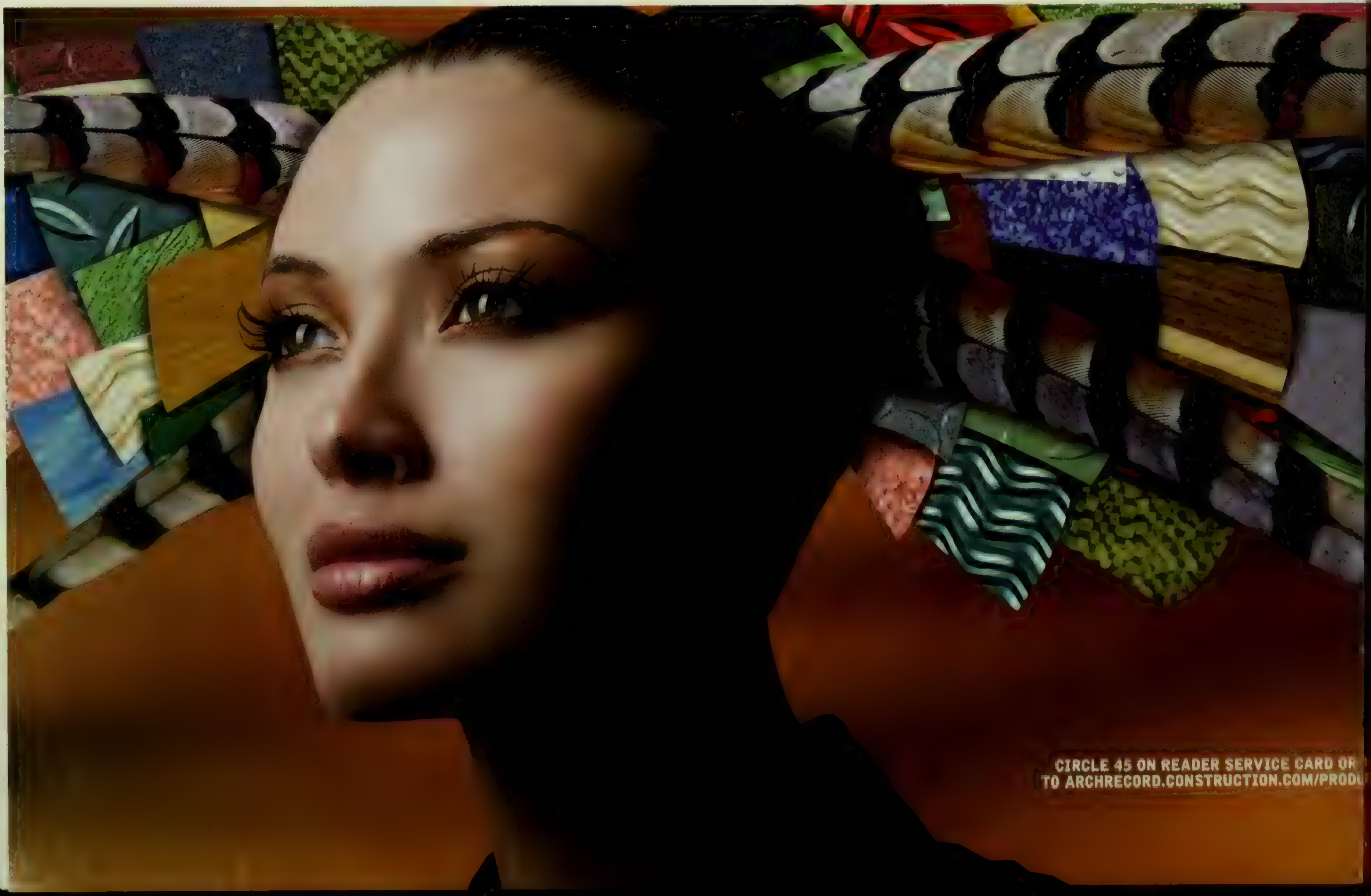


Gruen Associates' 20th Area station (top) AC Martin's Hollenbeck station (below).

At the 20th Area Police Department facility, located in Korea Town, Gruen Associates used the look of the officers' shield to inspire the building's membrane. Composed of ballistic-rated glazing, fiberglass, and a faceted metal panel system, it imparts a lightness and openness. A perimeter site wall peels off the main structure, defining the facility and creating secure outdoor areas.

New bomb-squad facilities in Granada Hills and downtown Los Angeles, by WWCOT, are necessarily less transparent, but still unique. Double-hued plaster, similar in look to the bomb squad's hazardous-duty gear, is employed on the facade while a jagged window alignment symbolizes patterns of detonated bomb shrapnel. Projected window frames allude to the force of internal detonations and provide added security.

Other firms working on Proposition Q facilities include HOK, RNL Design, AC Martin, and Carde Ten. DMJM and the Downtown Architecture Alliance are designing a new, 11-story, 500,000-square-foot, triangular-shaped headquarters for the LAPD with a granite exterior and random window pattern. While not part of the Proposition Q inititative, the building will add significantly to this mix. *A.M.*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Twin houses look both inward and outward

Los Angeles-based Hadrian Predock says he's tired of the "clichéd, white-box" Midcentury Modern L.A. home.

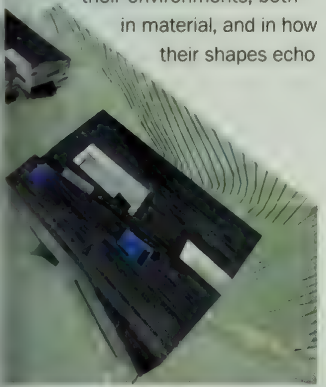
As an alternative, he's designing two almost-identical hillside residences in Pacific Palisades, California, that are still Minimalist, but are designed using the surrounding topography as their inspiration.

The 4,000-square-foot steel-frame houses, built of cedar with dark metal roofs, will blend into their environments, both in material, and in how their shapes echo their site's incline. They will be located at the top of a steep hill overlooking a nearby valley and the Pacific Ocean.

But the views won't be the architect's only focus. "Traditionally these types of houses focus on the outside. We're looking inside as well," says Predock. Small courtyards within the house, paved with local stones, will draw light from above, and interior spaces will be built into exposed bedrock, forming a craggy wall. Large windows and decks frame views of the surrounding mountains.

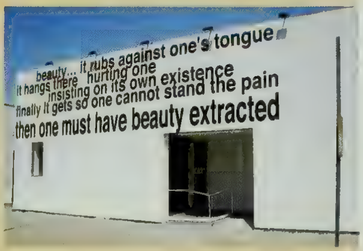
The houses' design also developed from combining computer diagrams formed around Pacific Palisades and Los Angeles zoning ordinances.

The houses' owner will be the project contractor. He will live in one house and will rent out the other. Not quite identical, the homes will have very subtle differences in texture and in spatial arrangement. *S.L.*



The houses will be near replicas.

Arts incubator, meet busy thoroughfare


beauty... it rubs against one's tongue
it hangs there hurting one
insisting on its own existence
finally it gets so one cannot stand the pain
then one must have beauty extracted

Culver City's downtown arts district is quickly becoming a destination for new galleries, with more than 15 opening here in the last few years. The newest showroom, called LAXART, operated by the area's only nonprofit arts group—also called LAXART—opened in late March. It is a hub for the display of art, architecture, and design.

The 1,800-square-foot gallery was designed by local architect and SCI-Arc professor Peter Zellner. He did a lot with a $50,000 budget, bringing the building up to code, replacing brick walls with stucco, and removing a drop ceiling and interior partitions to create space. LAXART, which shares the building with a private art showroom, is now divided into two large gallery spaces, a small entry, and the nonprofit organization of the same name that runs it. The offices can be used for shows, and the galleries for public gatherings, lectures, and screenings.

In addition to full-scale installations, video work, sound work, painting, photography, and architecture exhibitions, the site also displays art on its exterior walls. The large text piece currently outside the space is not only an artwork, but serves as a perfect advertisement to drivers speeding by. *S.L.*

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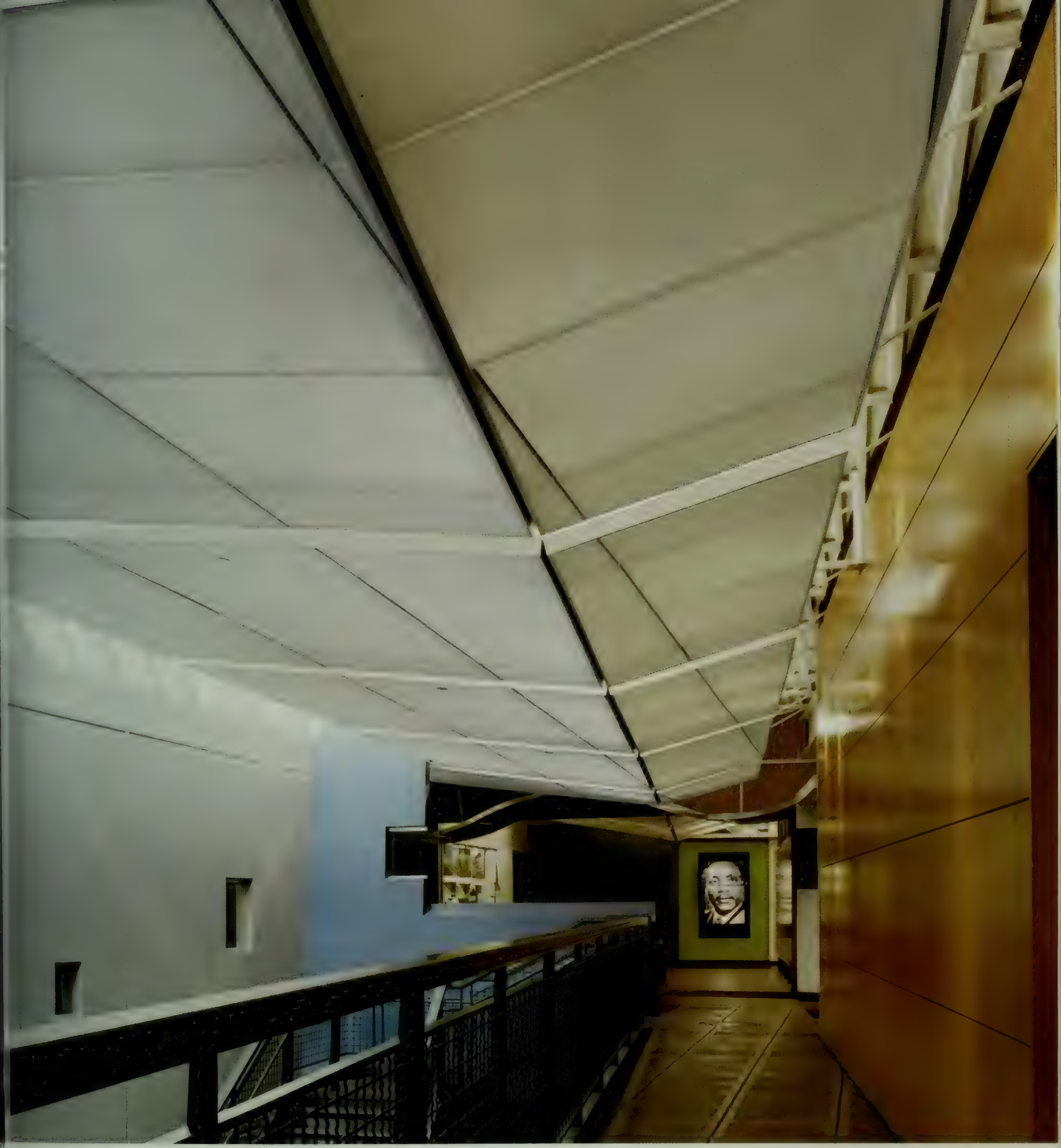

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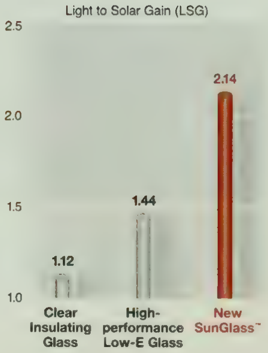

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For and about the emerging architect

archrecord2

Constellation of plastic? Circus without a tent? Call Los Angeles what you will, no one can deny that the sprawling metropolis is chock full of talent and ideas. We found Griffin Enright Architects there, a firm immersed in the creation of experimental and experiential buildings. We also found Victoria Ruskin, who uses her architectural training to bring a bit of reality to film and TV sets. Discover more about these gifted architects and others at www.archrecord.com/archrecord2/.

Design

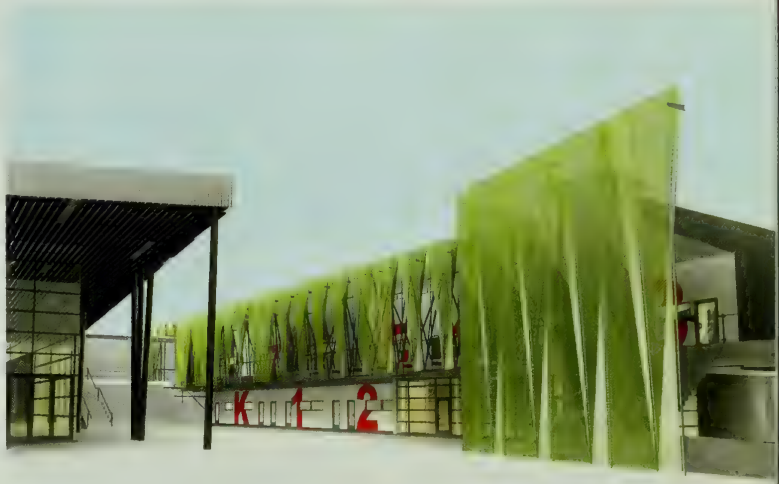
Griffin Enright Architects: More than form

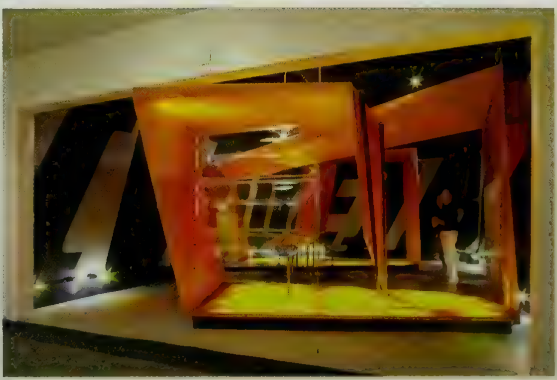
When John Enright, AIA, and Margaret Griffin, AIA, principals of Los Angeles-based architecture firm Griffin Enright Architects describe their design process, they sound more like archaeologists than architects. But while uncovering and excavating “embedded, underlying possibilities” may be the way this team approaches projects, unearthing a fixed solution is never their goal. “We're more interested in experimentation and transformation than either a definite resolution or even continuity,” says Enright.

The six-year-old firm may want to avoid continuity of style and expectation, but it can't avoid continuing to grow. With a slew of residential projects under their belts, Griffin and Enright are leading the six-person firm into more conceptual ground; adding their design voice to competitions; trying for bigger-scale projects and smaller installations; teaching and lecturing at such schools as SCI-Arc, USC, Cal Poly Pomona, and Syracuse University; and moving into landscape architecture. “Our work has always been about linking interiors to the environment,” says Griffin, “so it's just a natural progression.” Former East Coasters, Enright and Griffin have found Los Angeles to be just the right place to pursue their interest in the relationship between architecture and the environment. Their recent exhibition at SCI-Arc, *Keep Off the Grass!: Planar Landscape Phenomena*, presented an organic installation of more than 1,000 square feet of sod suspended in the exhibition space. Facts and statistics about grass and the negative impact that watering and maintaining Southern California lawns has on the environment lined the walls. The installation evolved as the sod decayed, serving as a beautiful sensory experience as well as a critique of he way we humans create strange and often inharmonious relationships with natural materials. “Grass costs nothing o install, and it's this pervasive material that covers the city like a blanket,” says Griffin “and yet here we are in the desert. It makes little sense.”

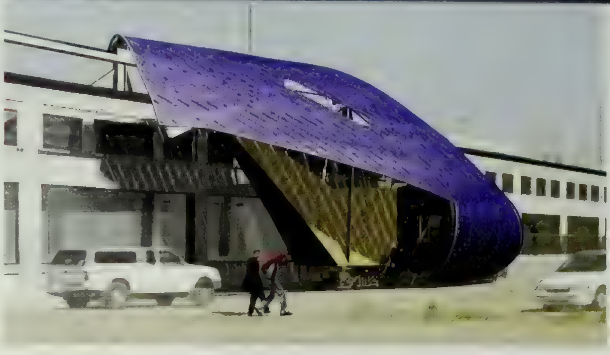
Despite the implications of *Keep Off the Grass!*, and the eam's current emphasis on using solar components in their

St. Thomas the Apostle School, Los Angeles, ongoing
This K-8 parochial school needed to double its existing building area. The design stacks new spaces in a vertical configuration and uses a series of scrimlike folded surfaces along walkways and facades.





[Wide]Band, L.A.DesignWeek/ NeoCon West, Los Angeles, 2006
More than a trade-show booth, the architects used the sponsored material to create a rest stop for show attendees. Most of the surface is made of two types of translucent composite panels that are backlit to create a glowing effect.

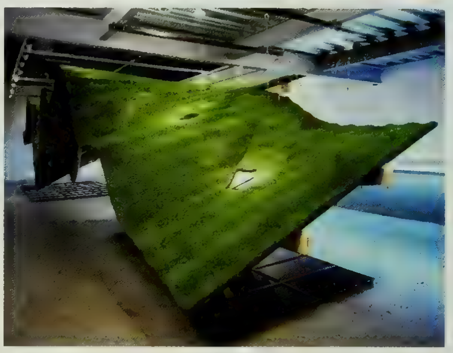


Mobile Exposure, SCI-Arc Café, Los Angeles, unbuilt
This competition submission called for a solar-assisted vehicle containing a café that can navigate along the western facade of the building, offering a mobile gathering space that can signal the shifting center of gravity of the building.

designs, Griffin and Enright don't necessarily see themselves as "green architects." "We're interested in tools and concepts that are useful," says Enright, "and employing them in different ways. We're not making 'solar architecture,' but it just so happens that there's a logic in using such things as tools." Enright explains this with the metaphor of being given a block of ice and being told to make something with only an ice pick, or with only a blowtorch, as opposed to being given the block and being told to find the best way to carve it. "We get the block of ice, and we get to choose the tools," he says, "and that's what excites us."

While Enright calls himself a bit of a pessimist ("You have to be to solve problems when there are so many forces out there that seem to be against the world of ideas," he says), he and Griffin are optimistic about the future of their firm, which they run like an atelier. "Everyone is a designer, and everyone answers the phone," says Griffin, who agrees that a day may soon come when expansion may change their current setup. "Any architect today has to look outside their backyard," says Enright. Both architects concur: They'll keep digging, keep experimenting, and they don't plan to be left behind. *Ingrid Spencer*

For more photos and projects by Griffin Enright Architects, go to archrecord.com/archrecord2/.



***Keep Off the Grass!: Planar Landscape*, SCI-Arc Gallery, Los Angeles, 2003**
Suspending sod in a gallery, the architects offered visitors a chance to view a changing, living organism in an unnatural setting. The show called attention to our precarious relationship to landscape.

Work

Victoria Ruskin: Crafting the perfect crime scene

It took awhile for Victoria Ruskin to get used to her job as art director for the CBS television show *Criminal Minds*. "The show's tendency is to kill women in horrible ways every week," she says. "It was really upsetting." But at this point, after a year with the show and two and half years art directing in film and TV, Ruskin, who has a graduate degree in architecture from UCLA, is immune. "I got over it!" she says. What Ruskin hasn't got over is her love of her job, despite the 60-hour work weeks and the responsibility to manage four to six sets per episode, an episode once every eight days. "I'm like the project architect," she says. "As art director, I bring the production designer's vision to life. I'm on the set all the time, and hire the people who do the drafting, the graphics, the construction, etc." While Ruskin admits that she misses creating projects that will be around for longer than a week, she confesses that her job, even with its deadlines and schedule, gives her a kind of light-hearted existence. "I miss opportunities to work on public housing—creating something that has a real relationship to human beings," she admits. "But my job is satisfying in that every few weeks I've finished something, and it's not so precious. It takes the pressure out of life, but the positives can also be the negatives."

Ruskin didn't intend to take her architecture training in this direction, but once she was in it, working as a set decorator on a film in San Francisco while she was waiting to get into architecture school, she worked hard to keep a momentum. "I started by getting coffee," she says, "like everybody in this business." From set decorator and gofer she moved to art-department coordinator, then set designer, eventually getting into the union—the ideal for contract workers in film and TV. "People come to set design from all different areas of design," says Ruskin, "but in my opinion, you want your set designer to be an architect." For every position she's held in the industry, Ruskin says her knowledge of proportion and space has helped her tremendously. "We build things," she says, "and understanding how things go together has helped me gain respect from the people I'm hiring. Also, there's a plus to understanding different styles of architecture."

Working in a renovated industrial space or on locations around Los Angeles for *Criminal Minds*, Ruskin has created sets ranging from offices to a Mexican police station to a Jamaican resort (built on nearby Long Beach). She's also worked on TV shows such as *Scrubs* and *Numbers*, and films like *Identity*, starring John Cusack. "We built a 12-room motel with courtyard, office, and poo all on one stage and shot there for eight weeks, making it rain almost every day." Still amazed by what happens behind, and beneath, the scenes of film an TV, Ruskin thinks she's hooked. "I have to bring a sense of reality to a set," she says, "so it's always a challenge, always fast-paced, and never boring." *I.S*

For Numbers, *Ruskin had to transform this rented pod (above) into a crashed aircraft. A CIA office for* Criminal Minds *(right).*

For more photos of sets Victoria Ruskin has art directed, visit archrecord.com/archrecord2/.

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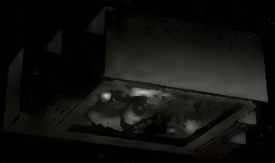

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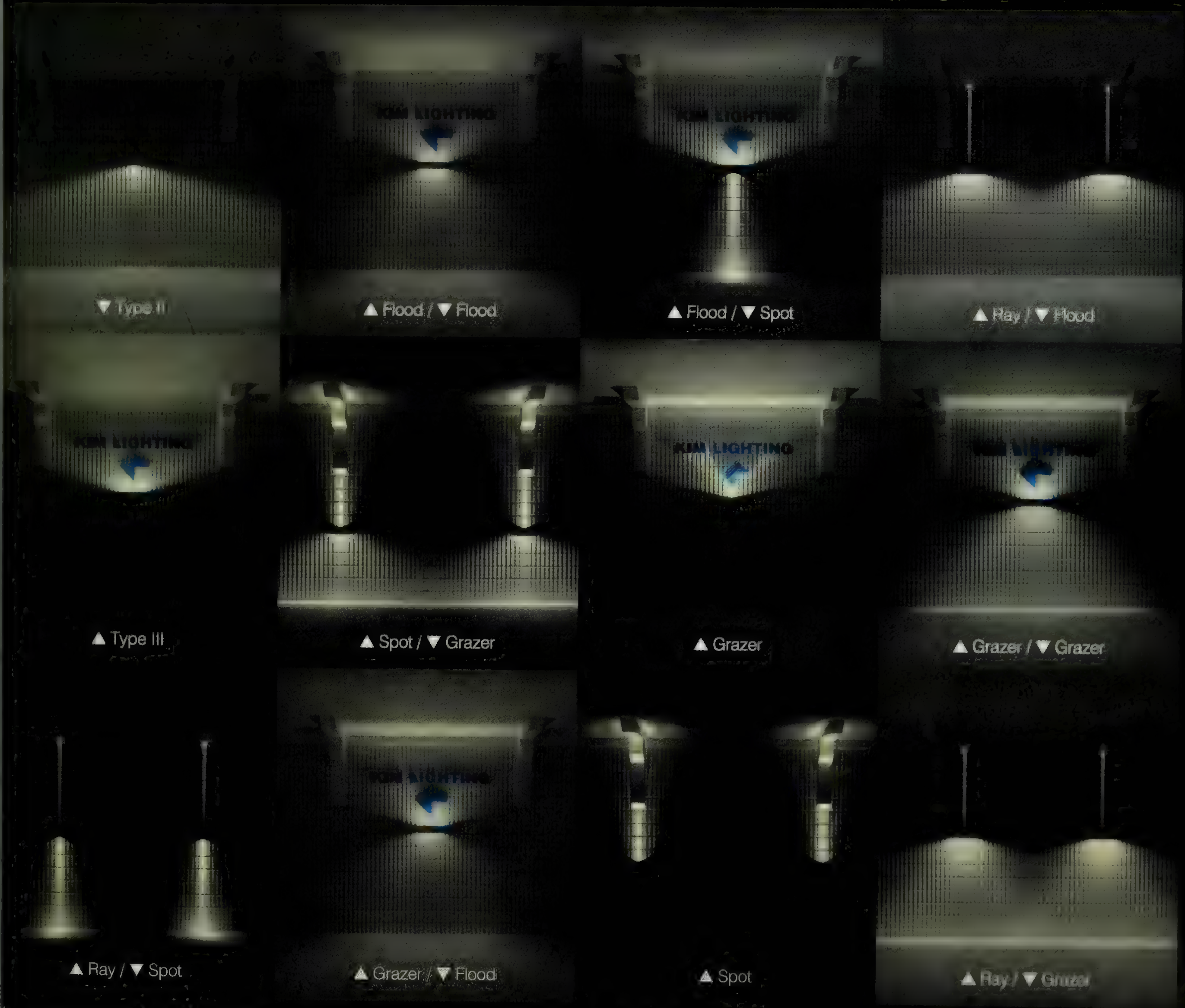

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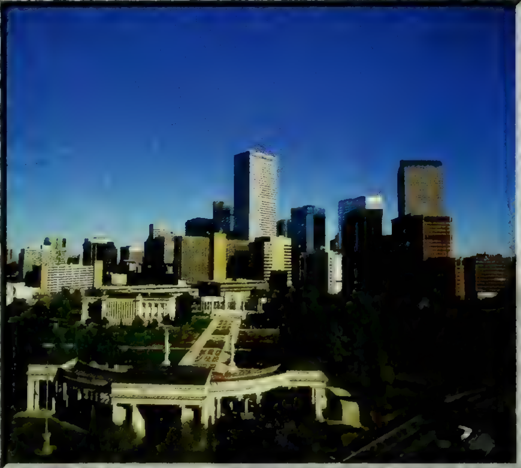

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What can we expect from the new generation of L.A. architects?

Critique

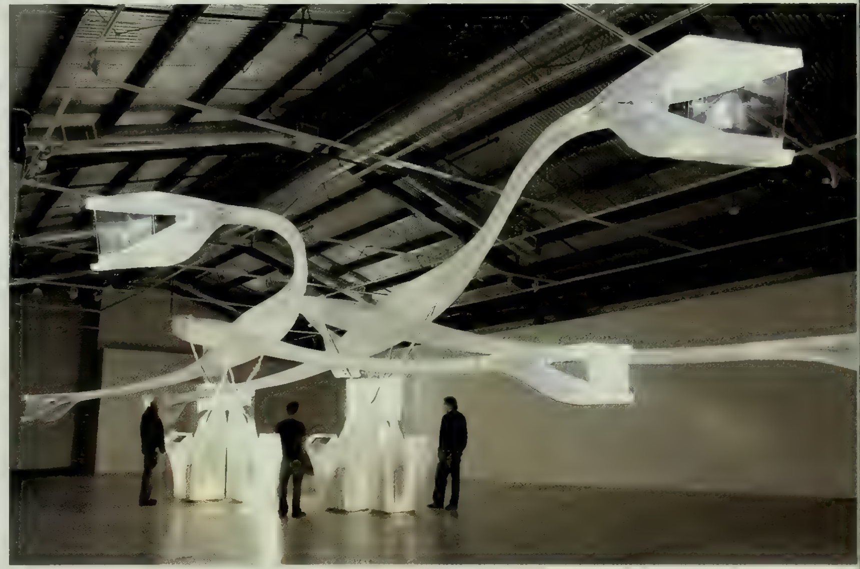
By Christopher Hawthorne

The last few months have brought a flurry of honors and attention for the up-and-coming architects of Los Angeles. Of the six slots in this year's *Emerging Voices* program at the Architectural League of New York, two went to L.A. firms: George Yu Architects and the duo of Frank Escher and Ravi GuneWardena. The San Francisco Museum of Modern Art has opened a show, running through September, on the work of Hernan Diaz Alonso, who is 36. And earlier this year the architecture collaborative servo designed an elaborate installation at the Santa Monica Museum of Art for a show called *Dark Places* that wound up generating more buzz than the exhibition itself.

Meanwhile, as the press releases about those events were being sent out, the architects in question were busy building—well, not a whole lot that can be called architecture, really. The firm servo has nearly as many offices around the world (four) as completed projects, even if you count museum installations and a Nike showroom as completed projects. Another one of the young firms of the moment, Gnuform, has been feted in the press for very small-scale commissions—call them micromissions—that include a reception desk for a cable TV channel. Escher and GuneWardena, with a ground-up house in Pasadena already completed, look like battle-tested veterans by comparison.

There's nothing new, of course, about a young architect with giant ambition and a thin portfolio. Architecture remains a field where prominence and gray hair are thought to be synonymous, especially by clients. And there are plenty of still-young firms in Los Angeles doing steadily notable work, much of it residential, and winning fans among clients and critics alike. This group, mostly in their 40s, includes Lorcan O'Herlihy, Michael Maltzan, Barbara Bestor, Marmol Radziner, David Hertz, and Daly, Genik.

What's different about the generation rising right behind them—L.A. architects between, say, 28 and 38—is the level of polish they bring not just to their fluid, digitally produced designs but also to their rhetoric about how they are remaking architectural practice. The group shares a combination of multitasking talent, media savvy, and a sometimes rankling sense of entitlement; instead of going to work right away for a large firm or establishing themselves the old-fashioned way—slowly building a list of contacts and clients—many have now been paying the bills for nearly a decade by teaching, writing, curating, or experimenting with fabrication or multimedia.


The firm servo designed the installation for a show called *Dark Places* in Santa Monica.

Most were drawn to Los Angeles by the presence here of an interconnected web of design talent that includes Hollywood set builders, architecture-school faculty, aerospace firms, and car studios. Their godfather is L.A.-based Greg Lynn, still pretty young himself at 42, who taught several of them at Columbia University.

It remains hard to say what kind of impact these young firms will ultimately have on Southern California. On some days, impressed by their talent, adaptability, and not least, chutzpah, I'm convinced that the connections they've forged with other parts of the design world will eventually make their architecture richer and more powerful—more relevant, in a word, to the mixed-up, high-low culture here. As Kara Bartelt, who runs a firm called Lettuce with Michael Chung, points out, the multidisciplinary designer with big plans and catholic interests is something of a tradition in Los Angeles, from the Eameses to contemporary figures like Mark Rios.

A generation of dilettantes?

When I'm in a less charitable mood, though, I tend to think that all the time these young architects have spent lecturing, fabricating, and building Web sites for bands they fell in love with at South-by-Southwest is not going to do them much good when they finally land a really significant architectural commission. The danger, to put it a little too bluntly, is that we're training a generation of dilettantes.

And I wonder, given their global frame of mind and how closely they

Christopher Hawthorne is the architecture critic of the Los Angeles Times. *He was formerly the architecture critic for* Slate.

track and respond to the work of their peers around the world, how deep a connection these young architects are making with Los Angeles—or even hope to make. Indeed, the loose, joyful, and inherently optimistic spirit of Southern California, which seemed to infuse every one of the Eameses' designs, from the short film *Blacktop* to their own house and studio in Pacific Palisades, is often lacking, it seems to me, in the work of the youngest L.A. architects.

In many ways, this group couldn't be more different from the architects who now rule the L.A. scene—Frank Gehry, FAIA, Thom Mayne, FAIA, Eric Owen Moss, and others. Those guys were combative rather than collaborative when they were younger, often flatly rejecting the notion that they learned from one another. "The first time I heard of Frank Gehry, I was 38 years old," Mayne once said. Just as important, that group spent their first decades as practicing architects working in relative obscurity. They had time to explore the city's neighborhoods and put down roots, personally and professionally—and their work, which could have come from nowhere else, reflected that. They were able to experiment, and falter, as they tried to find their voices.

Young architects these days don't have that luxury. They are often tagged as potential stars before they turn 30. Their early work, predictably uneven and overstuffed with ideas, is immediately dissected and analyzed by critics and bloggers. (The Internet has taken the idly mean-spirited cocktail-party chatter of 30 years ago and amplified it into quasi-public discourse.) Diaz Alonso's pavilion for PS1 in New York last summer got nearly as much attention among

At SFMOMA, Hernan Diaz Alonso exhibits his biomorphic architecture.

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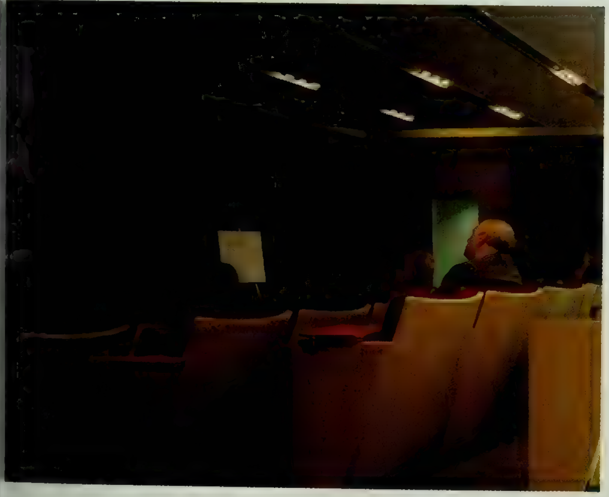

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young architects here as Mayne's Caltrans building—much of it in the form of rather bitter criticism from local designers who'd seen the pavilion only on the Web.

In part, this is simply the by-product of an age where images of design work can be transmitted as easily across the globe as across the street, and where the celebrity culture that has made stars of Zaha, Frank, and Rem is infecting the younger part of the profession, too. (Graft, a firm of German-born architects who spend most of the year in Los Angeles, will probably be better known from here on out for taking on Brad Pitt as a client—and a sometime collaborator—than for any buildings they wind up producing.) Critics, editors, and curators alike are guilty of mining the young generation a little too aggressively, expecting young architects to perform with the same precocious dazzle we associate with young novelists or even young athletes.

Still, many of the emerging firms in L.A. don't mind that level of intense attention. Some court it; others rather blithely *expect* it. This is the generation, these architects will enthusiastically tell you, that is poised to turn the old, exploitative model of practice on its head, using technological savvy to support itself and proving it can do without time spent polishing the boots of more established architects.

In many ways, contemporary Los Angeles is the perfect place to test that experimental view of what architectural practice might become. If Gehry, Mayne, and their peers had more chances to build at a young age simply because there was more room and cheap land in Los Angeles back then, the rising generation has inherited a denser and more proudly multicultural place that is also as socially fractured as ever. That city is crying out for the sort of dynamic, creative infill that young architects with their skills would seem perfectly suited to provide.

A city comfortable with risk

On top of that, Los Angeles is a city that embraces and even relies upon precocious talent. "There is a pretty big group of clients here willing to take a significant risk and work with younger firms," Michael Maltzan says. "I think that has to do to a large extent with the culture of Hollywood. You can be a first-time director and win an Academy Award. There's an openness toward giving opportunities to someone who's enthusiastic and ambitious."

For whatever reason, the match between city and generation has yet to bear much fruit. The easy explanation is that it will only be a matter of time before these firms begin producing architecture that will actually change how life is lived in L.A. But perhaps there's more to it than that. Perhaps it's a matter of commitment—burrowing, head-down, long-term commitment—to place. Many of the young firms here have one foot in the local architecture scene and the other in a global discourse. It's therefore no surprise that their work hovers in a kind of digital no-man's-land.

And maybe these architects have missed something valuable by skipping substantial apprenticeships with bigger firms. After all, there are lessons to be learned from an older architect that have little to do with the particulars of design. Among the most important is a kind of realpolitik approach to practice that suggests how to preserve some sense of independence, artistry, and growth while also winning commissions and seeing projects through construction. Even if you grind your teeth through a job like that, counting the days until you can escape and begin working on your own, you still come out understanding something vitally useful about how cities are made—and how they might be made better. ■

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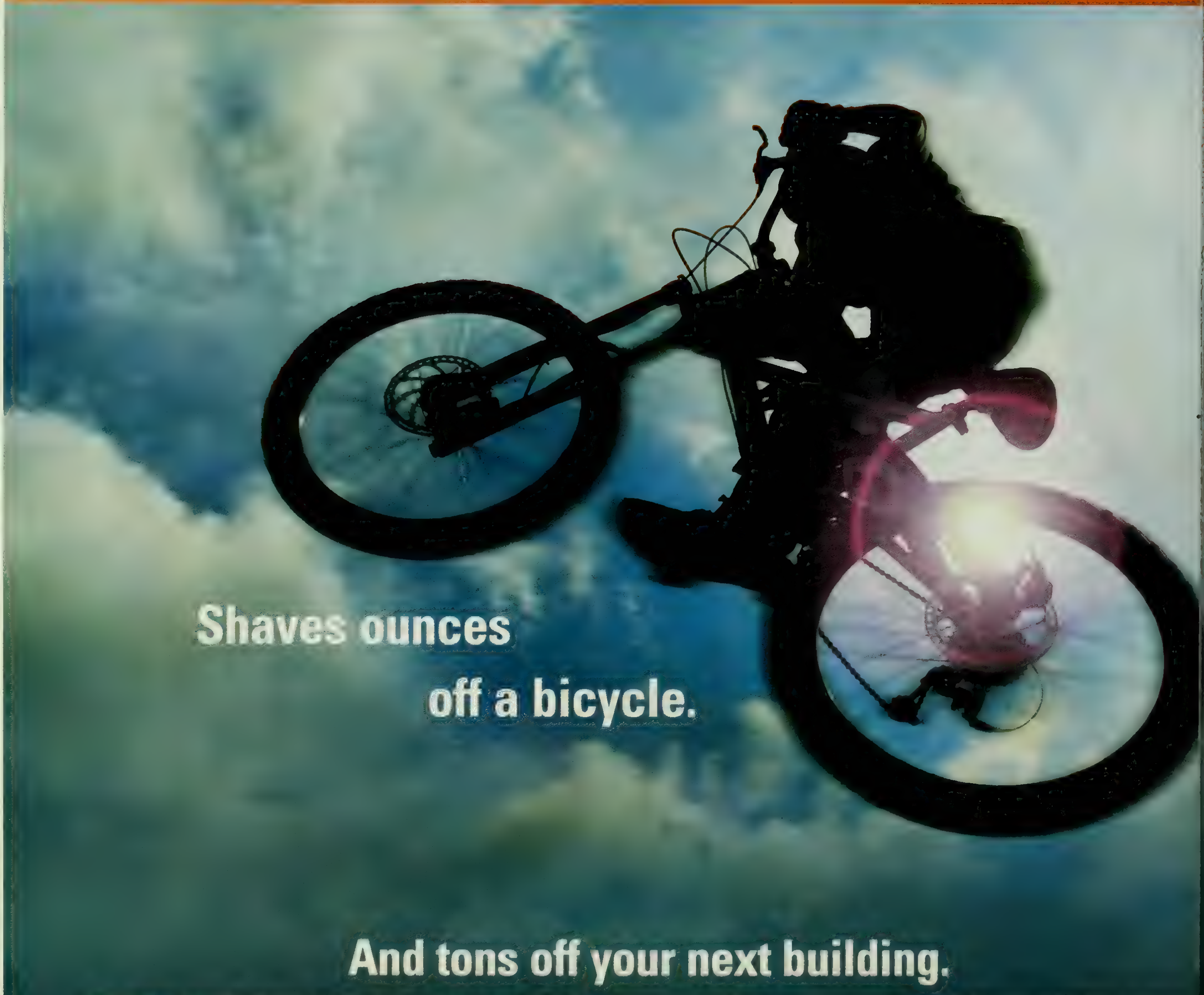

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Morphosis and L.A. appear in Paris, as Spain takes a bow in New York

Exhibitions

Morphosis. *Curated by Frédéric Migayrou;* **Los Angeles 1955–1985, Birth of an Artistic Capital**. *Curated by Catherine Grenier. Both exhibitions at Le Centre Pompidou, Paris, March 8–July 17, 2006.*

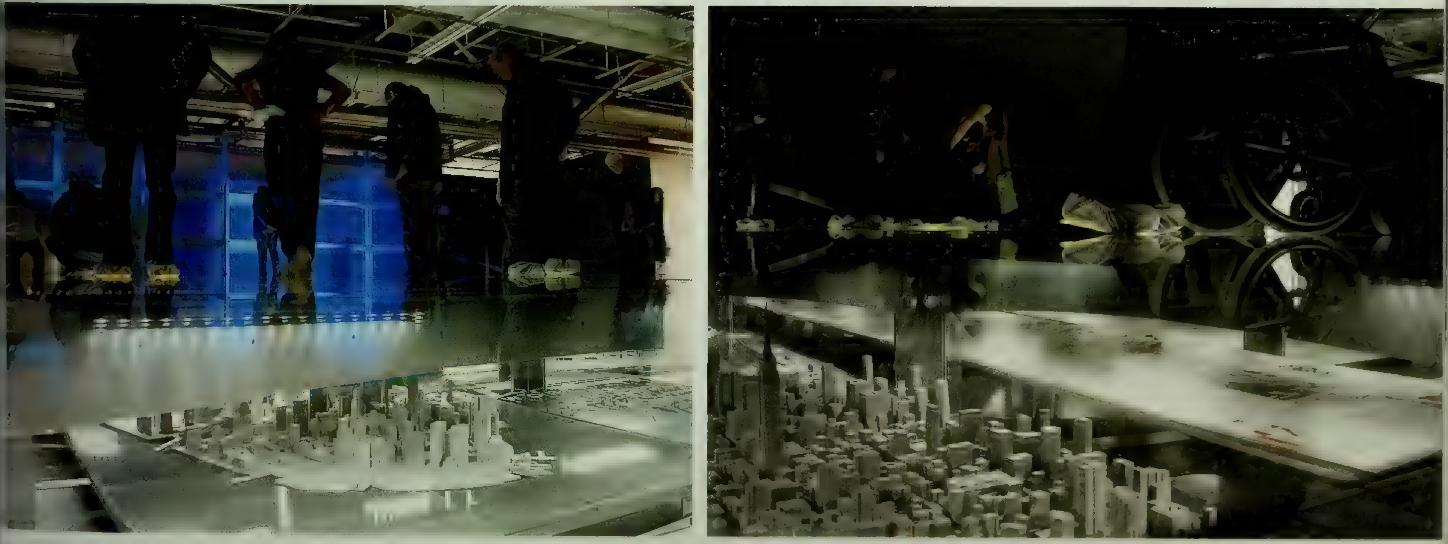
To experience *Morphosis: Continuities of the Incomplete*, an exhibition at the Centre Pompidou, in Paris, you'll need to slip on a pair of hospital booties and, in a dimly lit interior, ascend a gradually inclining, 2,640-square-foot glass-and-aluminum display platform. This giant vitrine, as well as the models and photographs beneath its glassy slope, are the work of the Los Angeles-based architecture firm Morphosis.

Visitors look down through the transparent platform onto representations of 24 Morphosis projects, as well as video screens featuring interviews with the practice's principal, Thom Mayne, FAIA, winner of the 2005 Pritzker Prize. The structure's aluminum frame forms a three-dimensional grid of rectangular boxes, intersected by a trio of diagonal metal strips. The overall effect is simultaneously that of a map, a movie theater, and a giant pinball machine. You cannot help wanting to get closer or, as the show's curator Frédéric Migayrou puts it, to "traverse" the glass. As in English, the French verb *traverser* can mean to go through or across, but also to infringe upon. The spectator is both curious and hesitant. After all, who wants the floor to break away underfoot?

At the top of the gentle incline, which rises almost 4 feet, a gridded screen shows dancers bouncing off of inflatable columns and, in other ways, literally confronting space. The ballet *Silent Collisions*, choreographed by Frédéric Flamand and performed by the Ballet Nationale de Marseille, includes sets that Morphosis originally created for the piece's staging at the 2003 Venice Biennale. The installation invites your eye to skip from the dancers to photos of Southern California's Diamond Ranch High School to models of the Cahill Center for Astrophysics at Caltech while hearing Mayne speak of striving to "enhance connectivity."

The idea is to show projects as they relate to each other and, in the connections, reveal the genesis of Morphosis's architecture. At this level, the exhibition works well: With the profusion of visual stimuli, your gaze travels constantly, allowing you to pick up the common threads. The grid may or may not evoke an "oversized computer chip," as the unsigned exhibition pamphlet suggests, but the installation does have a precious-objects-under-glass quality, leaving visitors divided as to whether to treat the brightly lit platform as a catwalk, perfect for photographing friends, or kneel down reverently for a closer look at the beautiful models below.

Under your feet, Mayne on video may be questioning the whole notion of trying to make Los Angeles anything other than what it is. "Why should L.A. have a soul?" he asks. For him, this sprawling, centerless city with its multiple personalities is an "experiment … a work in progress." The architect seems to embrace the idea that here, as he puts it, "people are no longer connected by geography" and "no audience [exists] for public space." The need to find a physical center and, conceptually, a formal consensus on the character of a



At the *Morphosis* show, visitors wear hospital booties and ascend a glassy slope, through which a display of models, drawings, and video clips appears.

municipality is very European. There, cities mark focal points with cathedral spires and town halls, as well as plazas and avenues, where the public automatically gathers in times of triumph or upheaval. From the Pompidou's uppermost floor, where the *Morphosis* and concurrent *Los Angeles* exhibitions appear, the juxtaposition of Southern California with panoramic views out the windows over Paris's rooftops is telling. It isn't, according to Mayne, about formal definitions. Sound bytes from the three different interviews with him remind us that architecture "can only be about our social structures."

The *Los Angeles* show includes this 1961 photograph, *Double Standard*, by Dennis Hopper.

This position seems very convincing on the way up the *Morphosis* slope. But along the descent, the perspective changes. The yellow letters spelling out *Morphosis* on the booties (coveted objects, which often go missing) grip the glass, but you get a strange, unbalanced feeling as you see the world of Morphosis upside down. Perhaps this is the point: to force us to experience the space from another angle, to prevent us from feeling indifferent.

Meanwhile, one gallery over, with the exhibition *Los Angeles 1955–1985, Birth of an Artistic Capital*, indifference hardly seems an option. The idea of L.A., the California dream, and the Beat Generation—all identified with freedom—tends to captivate Europeans. Catherine Grenier, who curated the show, admits the difficulty Europeans (used to what Thom Mayne calls "the village idea") have in grasping L.A. in all its sprawling glory. Yet it is precisely this "excessive and monstrous" place, she writes, that inspired many artists working there between 1955 and 1985. As the exhibition suggests, these artists shared a fascination with the everyday, the artificial, and emerging technologies, expressing them with any and all means at their disposal—from shopping carts to ketchup, artificial light, and video cameras. Years later, in a museum far from the Pacific Coast, the energy is still palpable in this presentation of more than 300 works—ranging from painting and sculpture to experimental film—by more than 80 artists.

Grenier makes a chronological study of the succeeding movements that turned Los Angeles from artistic backwater to a city of influence on the international art scene and home to such artists as Mike Kelley, Bill Viola, and British-born David Hockney.

THE JUXTAPOSITION OF PANORAMIC PARISIAN ROOFTOP VIEWS WITH THIS GLIMPSE OF LOS ANGELES IS TELLING.

Though spatially far more conventional than the *Morphosis* show, this exhibition offers an uncensored view presented in neutral, white-walled rooms. Each gallery centers on a different movement in the timeline, which includes Conceptual, Pop, and Performance Art. Much of the work asks you to look and listen—engaging viewers, though in different ways from the *Morphosis* show. As you ease into the role of voyeur, you get to share in an avant-garde happening, even one that happened long ago, feeling just a little more liberated. This is one reason the exhibition works. And with Hollywood playing a leading role in L.A. culture, the Pompidou is, in conjunction with the show, screening films about the city, including Roman Polanski's *Chinatown* and David Lynch's *Mulholland Drive*.

Stopping the chronology at 1985 marks not the end of a movement, but of the period that launched L.A. as an art capital. At that time, architecture aficionados were making their pilgrimage to Beverly Hills to see the recently opened Kate Mantilini restaurant, designed by the "hot" and relatively young firm Morphosis, which, like the city's artists, was exploring assemblage and nonconformity. Twenty years later, the Centre Pompidou presents a more mature evolution of Morphosis's architecture. The work is larger, and more complex, convincing, and socially engaging. Yet like L.A., Morphosis has not lost its edge or its almost cinematic talent for, as the firm's Web site puts it, "adding to the cacophony of modern life."

From the Centre Pompidou's voyeuristic escalators, descending from the exhibitions, Paris looks very calm and homogenous—still keeping up appearances, whereas L.A. lets it all hang out. *Claire Downey*

On-Site: New Architecture in Spain. *Curated by Terence Riley. At the Museum of Modern Art, New York City, February 12–May 1, 2006; Pabellón Villanueva, Real Jardín Botánico, Madrid, September 2006–January 2007; dates to be announced.*

How do you say "hotbed" *en Español*? The exhibition *On-Site: New Architecture in Spain*, at the Museum of Modern Art (MoMA) in New York, argues there may be no place on the planet more hospitable to cutting-edge design these days than Spain. The show spotlights 53 recent projects—18 completed and the rest either under construction or soon to be—from modest housing to flashy museums to vast airports. And like Spain itself, the design community represented here is a democracy, but with kings: The architectural models of up-and-coming Spaniards share the pedestals with the work of such international stars as Rem Koolhaas, Zaha Hadid, and Herzog & de Meuron. From Richard Rogers's Barajas Airport (done with Estudio Lamela), in Madrid, with its sumptuously wavy, wood-slat ceilings [RECORD, October 2005, page 150], to Jean Nouvel's gherkin skyscraper in Barcelona [RECORD, January 2006, page 88] to Juan Domingo Santos's urbane concrete-and-glass house, nestled in a cherry orchard near Granada, to Sancho-Madridejos's Valleaceron Chapel [RECORD, April 2001, page 73], an edgy twist on Ronchamp, these projects vary enormously in scale and take almost any form you can imagine.

The show's installation is as

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vibrant as many of the projects. Huge color photomurals of the completed buildings (Roland Halbe is the photographer) paper some of the gallery walls and provide a dramatic counterpoint to the intricacy of the models on display. First to greet you is an enormous eye-popping image of Santa Caterina Market in Barcelona [RECORD, February 2006, page 98], an old Neoclassical structure rehabbed by the late Enric Miralles and his partner Benedetta Tagliabue with a fabulous undulating roof of multicolored tiles. An eclectic array of projects unfolds through the exhibition: a museum in Cantabria by Mansilla + Tuñón, conceived as a cluster of mountainlike forms; towers that tilt or cantilever; a canopy of enormous mushroom shapes by MAP Aquitectos to shelter Roman ruins; a house of 11 pavilions burrowed into a hillside by J. Mayer H. But as exciting or beautiful as many of these projects appear (though a few just leave you scratching your head at their inclusion), the exhibition is frustratingly skimpy on information and interpretation. The wall texts accompanying each project give you little sense of context and provide almost nothing on the architects themselves—their backgrounds, their influences, even their ages.

And answers to the central question the show raises—why Spain and why now?—remain a little murky. A brief introductory wall text traces the momentum for architectural experimentation back to 1986, when Spain joined the European Union (and the catalog contains a fuller critical history of the then-impoverished country "shaking off the dust" of the Franco regime and getting an infusion of nearly $110 billion from the E.U. over two decades to build infrastructure). The Seville World's Fair and Barcelona Olympics, both in 1992, helped fuel a desire for innovative building. And of course, the Bilbao Effect had as much impact in Spain as anywhere, sparking the design of even more destination architecture.

Ultimately, the exhibition—the last Terence Riley curated before leaving MoMA to become the director of the Miami Art Museum—seems merely to say that patronage in Spain is superenlightened: Just look at all this cool stuff. The show furthers the modern idea that a global architectural language trumps local culture—with no real acknowledgement of Spain's strong regional design traditions. Take Miralles and Tagliabue, represented here not only by the Santa Caterina Market, but also by their stunning Gas Natural Headquarters, a multilevel, mirrored-glass building that abuts a railway and cantilevers over Barcelona's old waterfront. The show gives no hint of how Miralles emerged, along with a tight group of young Catalan architects, from the gloom of the Franco years and forged a design sensibility influenced not only by international Modernism, but also by his own sophisticated surroundings and community. Nor do we learn whether any of the next generation of Spanish architects shown here are, in a real sense, his heirs.

Yet the best projects in *On-Site* do reflect their local context, whether designed by a Spanish architect or a foreign one. Look at Rafael Moneo's buttery stone addition to the Murcia Town Hall or David Chipperfield's stark Cor-Ten-steel passageway through an ancient stone wall in Teruel. Or an amazing piece of urban infrastructure by the firm of Martinez Lapena-Torres: a dramatic zigzagging outdoor escalator, carved into a walled hillside in the old city of Toledo. In these places, where 21st-century design meets the culture of Spain, something uniquely beautiful results.
Cathleen McGuigan

The installation features intricate models, in counterpoint to huge photomurals of completed buildings, shot by Roland Halbe (this page).

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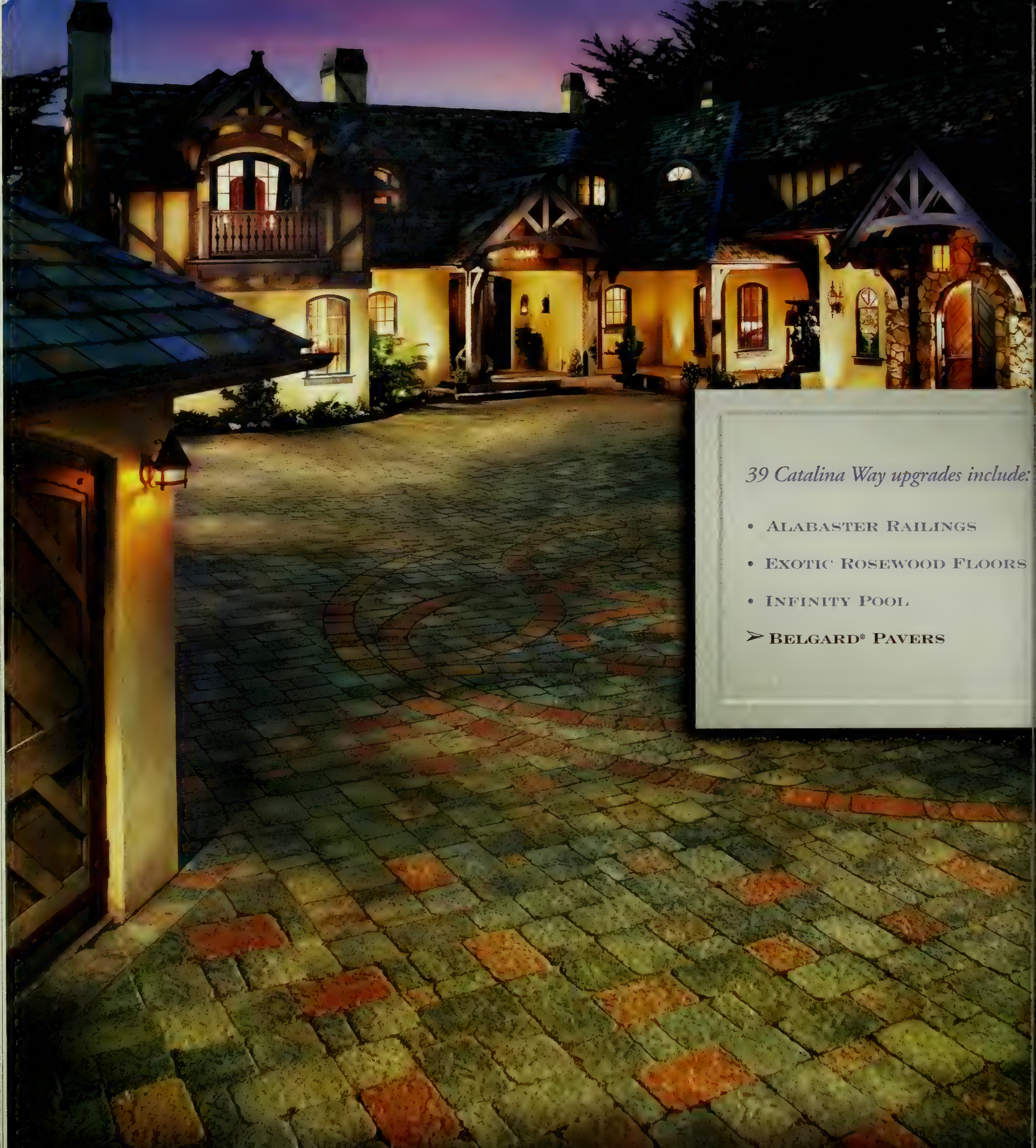*39 Catalina Way upgrades include:*

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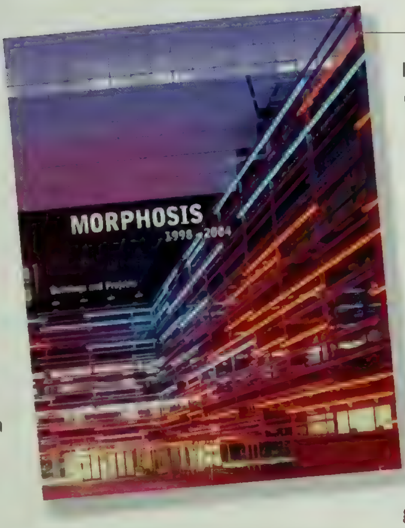
L.A. on the page: From star architects to sprawl

Books

Morphosis: Volume IV, *by Thom Mayne. New York: Rizzoli, 2006, 384 pages, $75.*



Last year, when Thom Mayne became the first American to win the Pritzker Architecture Prize in 14 years, the press described a sort of Mad Max of architecture. Mayne was characterized as "the bad boy of Los Angeles architecture," a designer who approaches architecture as a contact sport and creates schemes full of violent collisions, conflicts, and jagged shapes.

This fourth volume in Rizzoli's series on Morphosis, covering the years 1998–2004, offers a more complete, nuanced picture of the architect and his firm. Mayne's project descriptions are engaging; nearly each of the 10 essays about him adds a valuable new insight or two; and the book's illustrations are stunning.

Mayne is a rare architect in at east two ways. Most acclaimed American architects specialize in prestigious cultural commissions (museums, university buildings, prominent institutions) and shun government buildings, schools, and housing as too overdetermined by code restrictions. Such workmanlike buildings form the bulk of Mayne's recent work, including the Caltrans California Transportation) headquarters and the Diamond Ranch School, in Los Angeles, and housing n Toronto and Shanghai.

Second, Mayne abides by no rules or doctrine. His approach is mprovisational and open to every influence. His strength, writes Peter Cook, cofounder of Archigram in the 1960s, has always been his "quizzical attitude … questioning, questioning, and scratching forward, always beyond the obvious." With time and the increased scale of Mayne's projects, his work has gained a sense of restraint, even "reassurance," Cook believes.

Mayne writes that his strategies, instincts, and process remain "much the same" as 30 years ago. "But we have long sought to bring more to bear on a problem, not less." His firm has become a leader in the design of sustainable architecture, in part by ramping up passive strategies he used in small buildings. Caltrans and the San Francisco Federal Building are two examples, and in both, Michael Sorkin writes, "the interdependence of small and large elements … brings the buildings alive, a genuinely organic strategy." Sorkin describes Morphosis's architecture as a "weave of form and behavior," including urban behavior. Jeffrey Kipnis adds that the Recreation Center at the University of Cincinnati "steamrolls over nicety to install the uncertainties, the erotics, the distractions, the fears, even the banalities of the city."

Today, innovative ideas have to do with making buildings not simpler but more complex, adds Lebbeus Woods, and Morphosis is "at the forefront of exploring complexity as both an architectural strategy and a social reality." Morphosis seems tailor-made for this era of rapid change and growing complexity. The firm's name, of course, means transformation.

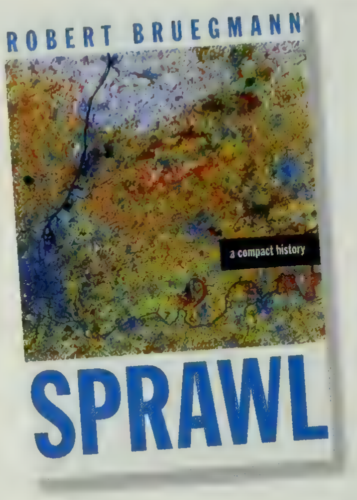
But let's not entirely dismiss Mayne's bad-boy image or forget that since the earliest days, the avant-garde has been linked to badness. In her essay, Sylvia Lavin likens Mayne to the 1940s actress May(ne) West, famously remembered for the line, "When I'm good I'm very good, but when I'm bad I'm better." As this book shows, Mayne is getting better all the time.
Andrea Oppenheimer Dean

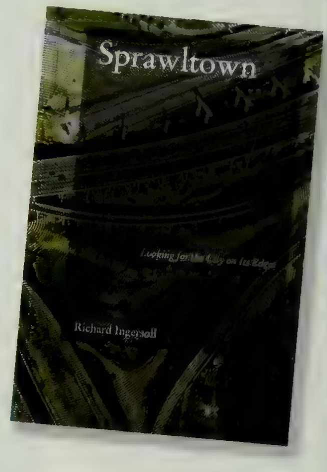
Michael Maltzan: Alternate Ground, *by Raymund Ryan, Ai Weiwei, Mirko Zardini. New York: Pittsburgh: Carnegie Museum of Art, 2005, 220 pages, $20.*

Michael Maltzan is that rare phenomenon, an architect who achieves renown and plum international commissions before the age of 50. Detractors attribute his success to social climbing among the L.A. glitterati and a lack of design audacity. Fans attribute his rapid rise to subtle design strategies that graft new and old, are sensitive to topography and perception, and emphasize daylight and continuous circulation.

A native of Long Island, New York, Maltzan graduated from the Rhode Island School of Design and from Harvard, where the Portuguese architect Alvaro Siza and the Argentinean team of Rodolfo Machado and Jorge Silvetti became lasting influences. An eight-year stint at Frank Gehry's firm completed Maltzan's training.

After opening his own firm in 1995, Maltzan began specializing in architecture for art. Designing residences for clients with art collections opened doors. Maltzan's design for Alan Hergott's house in Beverly Hills was included in the Museum of Modern Art's *The Un-Private House* of 1999. His breakthrough project of 2002, MoMA QNS, a temporary space for the Museum of Modern Art, combined bold graphics on the exterior and a sculptural entry ramp inside. A number of other museums followed, including the Sonoma





County Museum and the Fresno Metropolitan Museum, which integrates new construction with a 1908 Post Office building.

Maltzan buildings "become points of repose and equilibrium amid the unstable balance" of chaotic cities, writes Mirko Zarkini in an essay for this book, which accompanied a 2005 show at Pittsburgh's Heinz Architectural Center. The book's 16 projects demonstrate Maltzan's delicate layering of often fragmentary forms to create nearly cinematic sequences of images. Matte illustrations, often showing only building fragments, suit Maltzan's design approach. As with his architecture, the book is more than the sum of its parts. *A.O.D.*

Sprawl: A Compact History, *by Robert Bruegmann. Chicago: University of Chicago Press, 2005, 264 pages, $28.*

To generations of critics, from Lewis Mumford to Andres Duany, sprawl is a cancer. To Robert Bruegmann, such emotionally charged metaphors distort a complex and unpredictable force. In this meticulously crafted, intellectually balanced book, Bruegmann takes on the values, rhetoric, and evidence underlying antisprawl reforms.

Combining scholarship with his own travels, Bruegmann examines three 20th-century antisprawl campaigns, the first originating in Britain in the 1920s, the second around 1958 with William H. Whyte's *The Exploding Metropolis*, and the third peaking in the 1990s.

The results, he cautions, have been mixed. Portland, Oregon's highly touted light-rail system has absorbed less than 3 percent of regional trips, and no sizable increase is projected. In Hamburg, Germany, as in Portland, restrictions on developing open space have escalated housing prices. Labor laws, designed to regulate store sizes and ward off discounters, have resulted in higher prices.

Bruegmann believes that immutable forces make sprawl inevitable. He traces sprawl's development from China's Ming dynasty (1368–1644) to the present. "Choice, privacy, and mobility," he writes, perpetuate sprawl, low housing densities, and automobile reliance.

Sprawl is a remarkably persuasive effort that deconstructs the conventional wisdom of antisprawl reformers like no other book since Joel Garreau's *Edge Cities* of 1993. It deserves to be read by lovers and haters of the spread city. *Martin Zimmerman*

Sprawltown: Looking for the City on Its Edges, *by Richard Ingersoll. New York: Princeton Architectural Press, 2006, 176 pages, $20.*

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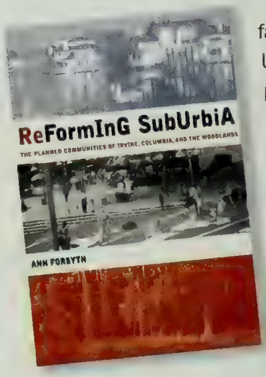
Like Bruegmann, Richard Ingersoll accepts sprawl as inevitable, the result of burgeoning populations and "the invincible models of consumerism." As the conveyor of information, the centered city has been made redundant by electronic communications, Ingersoll writes. He sees sprawl "as a way of life more than a form of urbanism."

Acknowledging that sprawl banishes the idea of belonging to a civic whole, and usually takes ugly forms, Ingersoll the optimist accepts sprawl as a challenge. In time, he believes, it might define a "new type of urban beauty, a new bond of citizenship, and a new sustainability."

Sprawltown, Ingersoll explains, "is a proposal to prepare ourselves for the consequences of the largest urbanization in history." Like preparing for weather, it requires adjustments and fixes. In a series of five essays, the author examines several phenomena that shape current urbanism, including tourism, the single greatest generator of employment and revenue. In a chapter called "Jump-Cut Urbanism," he compares forms that appear scattered and awkward to the cinematic jumpcut. "Driving a car," he writes, "is somewhat like editing a film. What is missing is the sense of narrative, which is the designer's task."

In a chapter on ecology, Ingersoll accepts that environmental apocalypse has already occurred and says, "We should assume the attitude of cancer patients seeking a way of prolonging life in an agreeable form." He then goes on to conclude: "Every act of design should offer new options. And no technical solution should be conceived outside of a social frame." *Colin Fleming and A.O.D.*

Reforming Suburbia: The Planned Communities of Irvine, Columbia, and the Woodlands, *by Ann Forsyth. Berkeley: University of California Press, 2005, 379 pages, $30.*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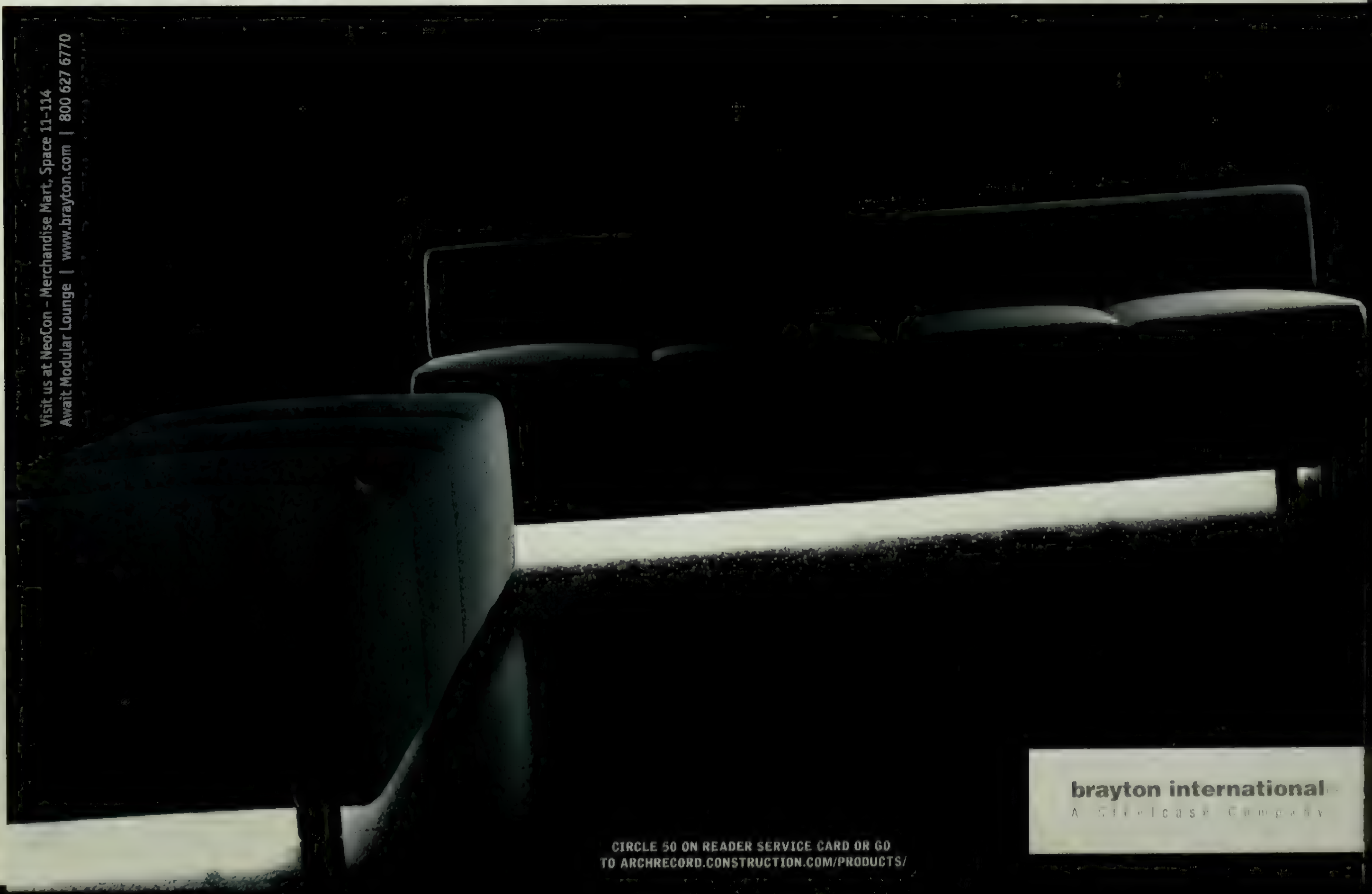
THE PLANNED COMMUNITIES OF IRVINE, COLUMBIA, AND THE WOODLANDS
ANN FORSYTH

The emphasis of the "new community movement" of the 1960s and '70s mirrored that of today's New Urbanists, but produced comprehensively planned new towns. Among the largest and most assiduously planned were Irvine, California; Columbia, Maryland; and The Woodlands in the Houston suburbs. Ann Forsyth's study draws on dozens of interviews with the towns' developers, designers, and residents, and on extensive archival research.

At Columbia, developer James Rouse's focus was social equality, and the town's 100,000 residents remain racially, though not economically, mixed. The Woodlands, designed by Ian McHarg as an ecological refuge, has become partially gated. Irvine is the largest and the most aesthetically formal. The author notes that all three towns fulfill most New Urbanist aims at a grand scale.

But all three places fall short—as do New Urbanist developments—providing insufficient affordable housing, inadequate energy conservation, and failing to reduce residents' car use, despite offering alternatives. Forsyth concludes, therefore, that New Urbanism's techniques are deficient "on their own to reorganize their metropolitan landscapes to be smart, fairer, or more sustainable." She believes "more dramatic changes are needed," and urges us to look at European, Canadian, and Australasian solutions. *A.O.D.*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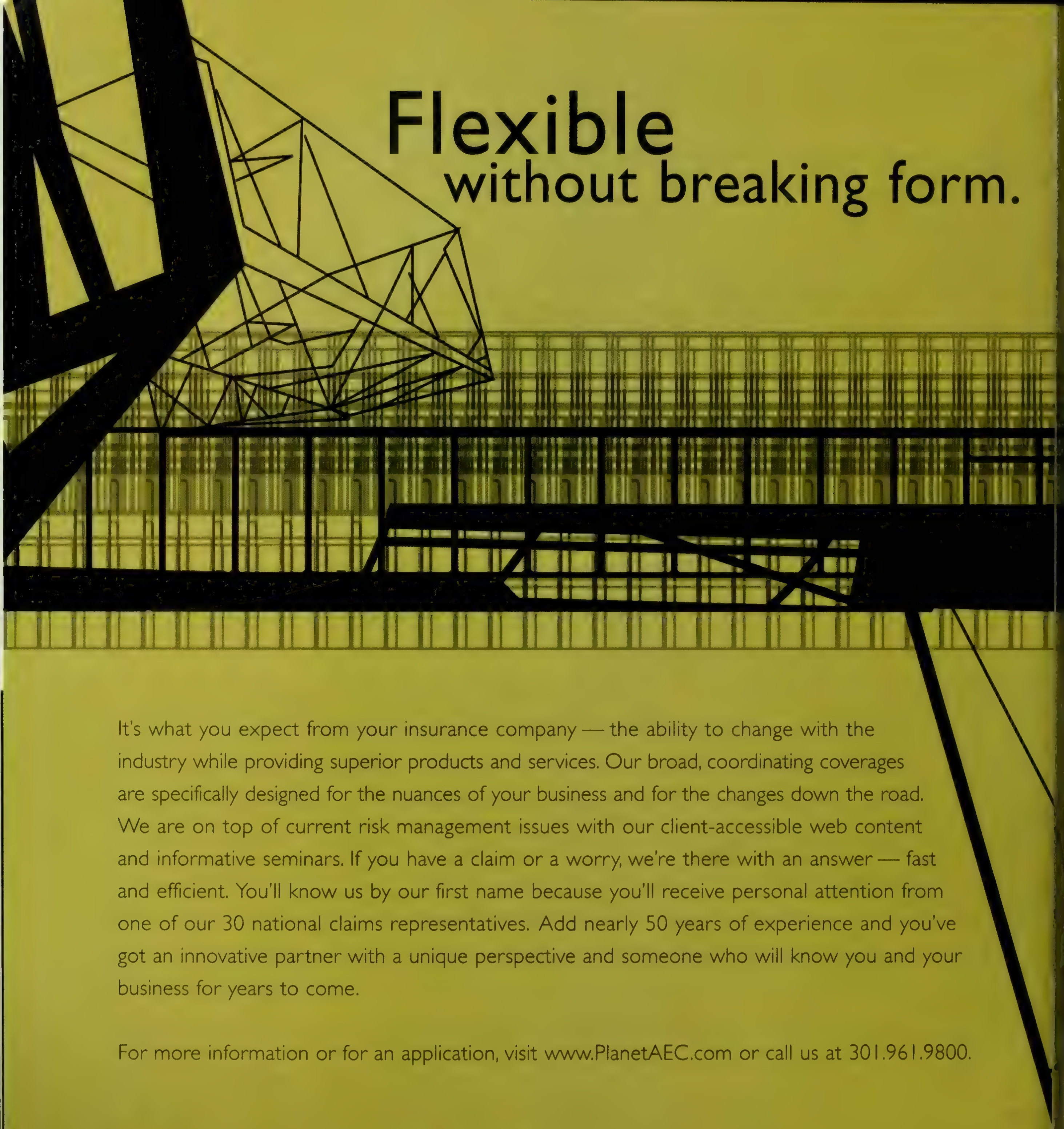

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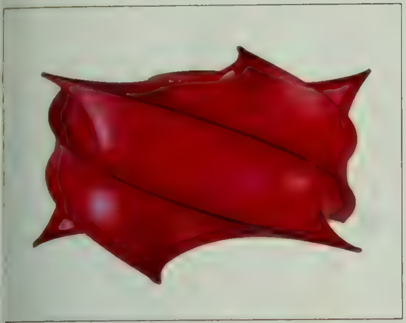

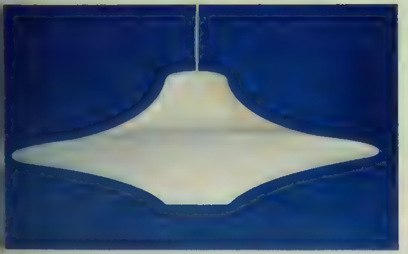

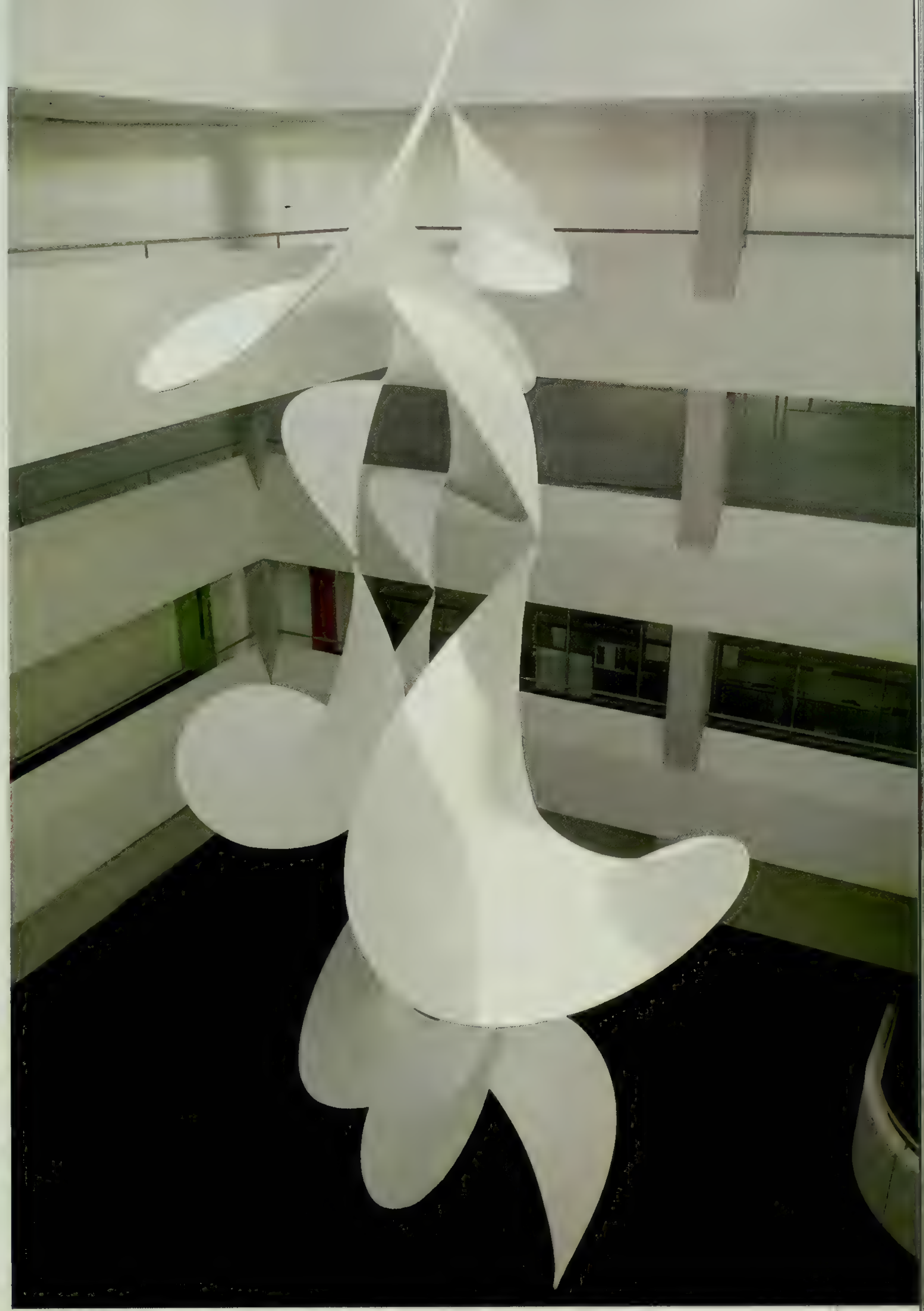

An L.A. studio creates floating tensile sculptures

y Rita Catinella Orrell

raped from the ceiling like a carefully peeled apple skin, the Nine Wings nobile pendant sculpture features three 30-foot strands of cascading winged hapes constructed of IFR (Inherently Flame-Resistant) poly/lycra fabric on a ghtweight fiberglass framework. Ball-bearing swivels allow the winged shapes o rotate independently as air flows through the space. Studio Lilica, a Los ngeles-based design house specializing in custom architectural lighting and fabric sculptures, was commissioned to lesign the piece by Gary Lee Partners of Chicago for the four-story atrium of 701 E. 22nd Street, a landmark building in ombard, Illinois. Assembled on-site and installed in one day, Nine Wings won a 2005 International Achievement Award rom the Industrial Fabrics Association International. Studio Lilica, Arcadia, Calif. www.studiolilica.com CIRCLE 200

tudio Lilica's architectural lighting line includes Cake (top left, in red), Lovelights (center left), and UFO pendants bottom left). Nine Wings (right) is suspended by stainless-steel aircraft cable and utilizes nautical-grade hardware.

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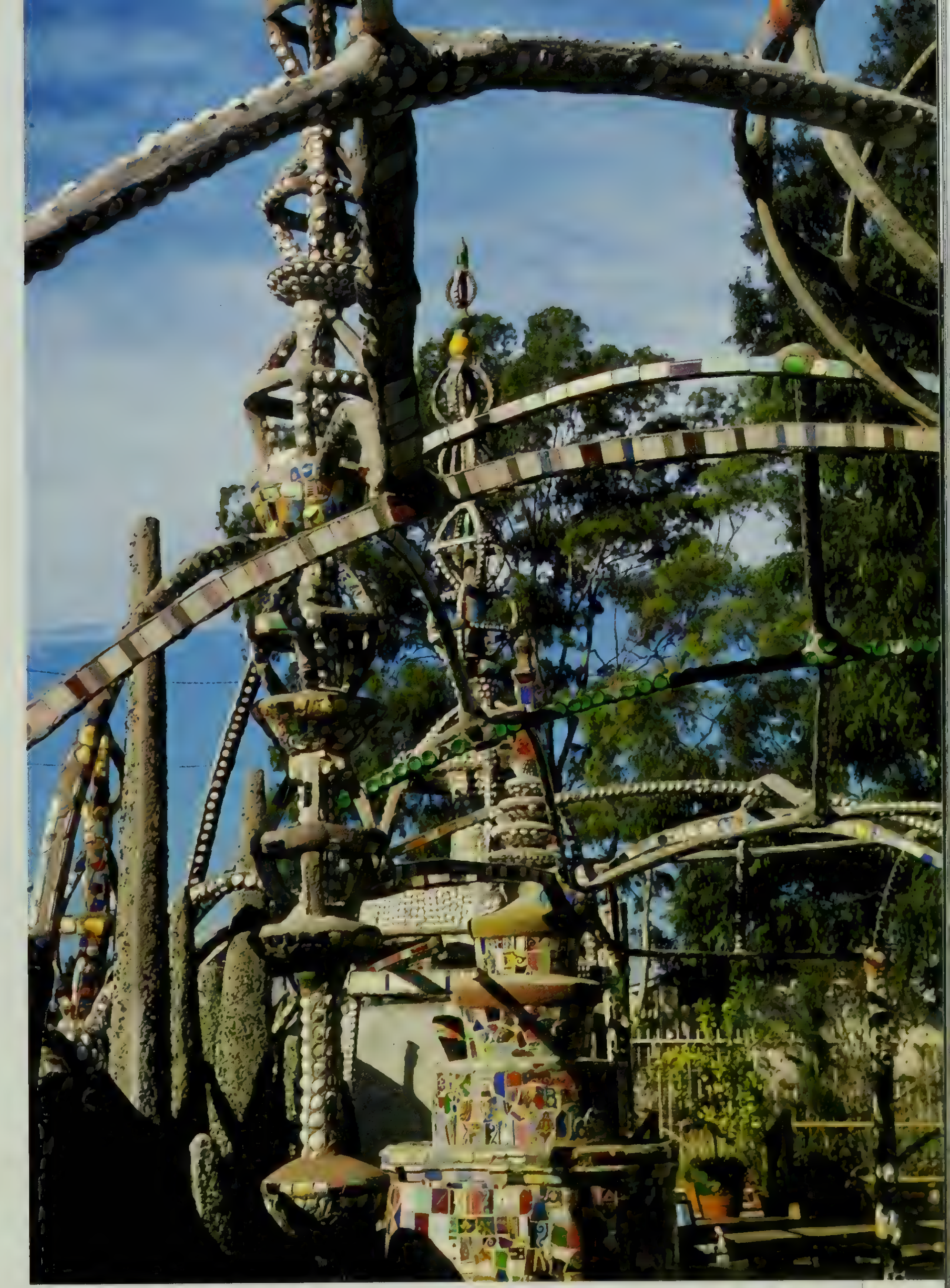


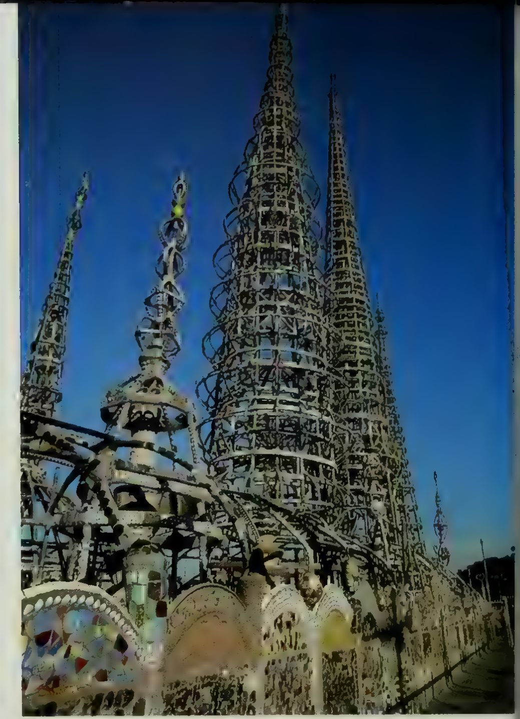
y **Beth Broome**

Big and brash, Watts Towers breathe L.A.

t once a fanciful, outsize sculpture and a skillfully engineered architectural onstruction, the Watts Towers rise majestically above the bleak landscape f South Los Angeles.

The product of an extreme act of dedication and determination, the wers' survival owes much to the same spirit, shared by preservationists, ommunity groups, and curators who have worked over the decades to save what is now a National Historic Landmark.

The towers are the work of an Italian immigrant, Simon Rodia, who spent his young adulthood in this country working s a miner and logger, among other things. Untrained as an architect, engineer, or builder, Rodia single-handedly built the wers between 1921 and 1955 on a small residential plot using hand tools and a window washer's harness. He used alvaged steel for the armature, which he wrapped with wire and wire mesh covered with cement mortar. The graceful ops and twists of sculptural forms and spires (the highest reach almost 100 feet) are ornamented with scavenged aterials, like glass and pottery shards, sea shells, and ceramic tile, and stamped with decorative wrought-iron scraps.



In 1959, the towers were declared a hazard by the city and were threatened with demolition. This prompted the first preservation effort: an engineer's report that showed the work to be structurally sound. Major restoration campaigns followed in 1979 and 1995 (long after Rodia's death in 1965) to repair cracks and remove rust from the exposed metal armature.

The latest effort, initiated in 2004 and overseen by Architectural Resources Group (ARG)—a consortium of architects, planners, and conservators—has included assessing and evaluating the condition of the towers and synthesizing the large collection of records that have amassed into a format that can be easily accessed to aid ongoing preservation efforts. ARG has created a 3D model of the towers linked to a database of the documentation. The model is divided into 4-foot-by-4-foot sections that can be clicked on to access all information relevant to those sections.

Some say Rodia's work was inspired by the pageantry of religious festivals in his native Campania. What drove him to create the towers, however, remains a mystery. "Rodia felt like people were trying to attach more meaning to his work than there really was," says David Wessel, principal in charge at ARG. When questioned, the artist would reportedly divulge his motivating force, "and then," says Wessel, "he would contradict himself on his next answer."

Whatever their inspiration, the towers (which Rodia dubbed *Nuestro Pueblo*) are remarkable in that they embody the power of perseverance—they are one man's astonishing accomplishment. Moreover, points out Wessel, they have found a home in Los Angeles. "They're visually stimulating," he says. "And L.A. embraces this kind of kitschy vernacular." ■

The towers, in all their Gaudíesque finery, have withstood the test of time. But not without help. Indeed, even their creator dedicated much of his efforts to maintenance.

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Italian Marble and Stone

THE ITALIAN STONE INDUSTRY

Italian stone materials are renowned throughout the world because of their wide range of colors and the size of their deposits. Italy's modern stone industry has a long tradition behind it and has managed to maintain its world leadership thanks to its highly skilled workers and avant-garde technology. The latter is the result of the close relationship between stone suppliers and machinery manufacturers which has led to positive results such as the production of more and more advanced machinery, the setting up and perfecting of plants already operating, guaranteed continuous assistance, on-site experimentation of new prototypes and remote assistance through the web sites. Thanks to the quality of its technology Italy is the most important country for the processing of stone materials too. The market demand for stone materials varies a great deal, especially because of color trends, and this means that suppliers must be able to offer the widest possible range of materials.

Over the years Italy has developed its role as intermediary and has become a world stone marketplace. In addition to the large quality of local materials Italy trades numerous materials imported from all over the world. Many Italian stone materials have been on the market for centuries; some are no longer available because of limited resources while others, thanks to new technology and knowledge, have recently been placed back on the market or reintroduced after a period of inactivity of the quarries.

The term marble is used to define all carbonate materials or other materials with similar physical-mechanical characteristics. The term granite is used to define all siliceous rocks which contain minerals such as quartz and feldspar. Finally, the stone category comprises all materials, generally not polished such as sandstone and porphyry.

Italian marble varieties come in a wide range of colors and textures like the white and veined varieties excavated from the Apuan Alps in Tuscany. The colored varieties include the green materials from Aosta Valley and Lombardy; the beige materials from Puglia (Serpeggiante and Trani), from Sicily (Perlato) and Lombardy (Botticino); the yellow materials such as Giallo Siena and Giallo Reale. The Veneto region is rich in several types of colored stone such as red (Ross Verona, Breccia Pernice, Rosso Magnaboschi) and pin (Nembro Rosato) marble; Rosso Rubino comes fro Tuscany; Portoro and Rosso Levanto are excavated i Liguria. Other colored materials include the Tusca Arabescato, Orobici, Breccia Medicea and Fior di Pesc Carnico.

The most important deposits of Travertine, also a we known Italian stone, are found around Tivoli, Rom Grosseto and Siena, all in central Italy. Pink and gra Sardinian granites are famous throughout the world f their homogeneity. The pink Baveno granite com from Piedmont. The stone category includes the Pietr Serena which is the compact, homogeneously colore gray stone used in the Renaissance palaces and squar in Florence and the Finale, Dorata and Santa Fior stones. A few varieties of trachyte, a volcanic roc with brownish-yellowish shades, are also found in th Veneto region. The yellow-colored Pietra di Vicenz is used in many architectural works. Other volcan rocks, such as Peperino and Basaltina are quarried i the Lazio region.

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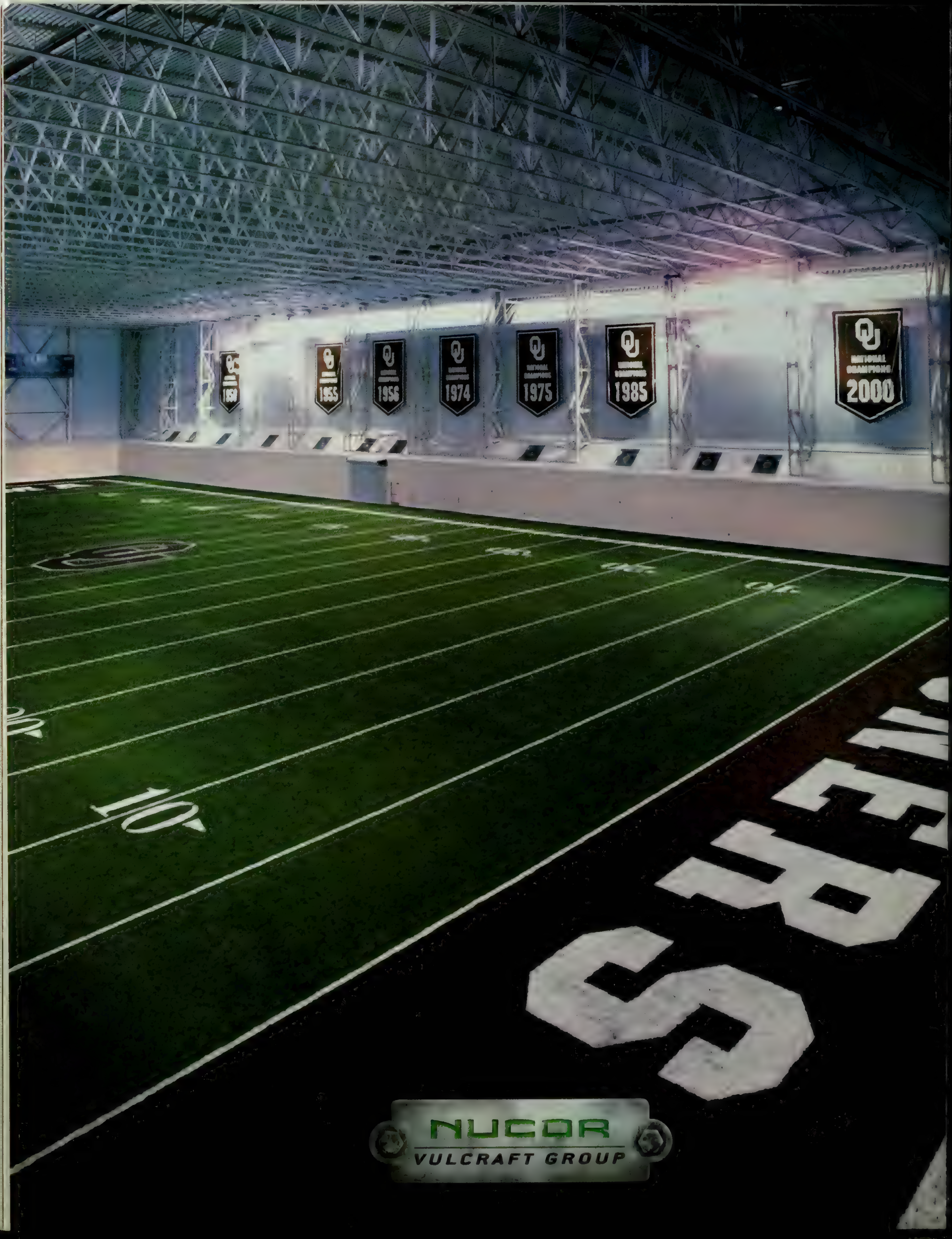
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PHOTO ESSAY

Night for Night—a surreal L.A. captured in nighttime images

Photographs by Kevin Cooley

"Night for night," is the term for nighttime scenes filmed on location during the night (as opposed to "day for night," where scenes shot during the day are edited to give the appearance of night). Kevin Cooley, a Brooklyn-based photographer, turned his lens to television and movie sets during a six-month sojourn in Los Angeles, exploiting the intense juxtaposition of ordinary suburban houses and extraordinary lighting created by studio crews. His own shots use long exposures and wide angles, with no additional lighting. "Hollywood basically recycles L.A. to make it look like places all over the world," he notes. Ironically, by photographing houses in this manner, Cooley captures a specificity of place that could only be L.A. *Sarah Cox*

"A city without privacy, where neighbors share each other's

awn and look into each other's bedrooms." —*Christopher Isherwood*

“What I like is a jumble of the tangible and the intangible, of

beauty and ugliness, that somehow sets me a-tingle." *—James M. Cain*

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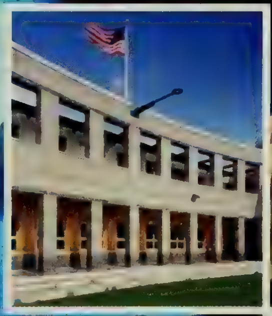

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What Is the Future of Los Angeles

With its clogged freeways and endless horizon of sprawl, Los Angeles has become what other cities strive to avoid. Its enclaves of glittering wealth contrast with flatlands of poverty. It's immigrants, speaking dozens of languages, enrich cuisine and music, charging the city with entrepreneurial energy, but also find themselves trapped in a persistent underclass. Los Angeles is an "ecology of fear," as Mike Davis so memorably put it, subject to earthquakes, floods, and wildfires. Joan Didion has painted a landscape of disconnection and disaffection, just as noir movies depicted a city hardened by dreams that had died. As thousands of architects prepare to visit Los Angeles for this year's National AIA Convention (June 8 to 10), ARCHITECTURAL RECORD'S James S. Russell, AIA, asked some longtime local observers and participants to think about what L.A. means to American culture and to speculate on its future.

Does Los Angeles, which has loomed so large in the American imagination, still foretell what America will become? Does it still invent the urban future and breed architectural talent? What will the city that gave us celluloid dreams and candyflake car culture bequeath us next? —*James S. Russell, AIA*

THOM MAYNE, FAIA

Principal, Morphosis, Santa Monica

RECORD: *Is Los Angeles still at the cultural cutting edge? Is it still a trendsetter?*
TM: In the 1980s and part of the '90s, the country's spotlight seemed to be on L.A. It was extremely active architecturally. There were a lot of ideas, and they seemed to get built. When I was quite young, Frank Gehry told me my first big work wouldn't be here. could do houses, shops, that kind of thing, but the chance to get important ork drops off like a cliff. In recent years, Gehry got to do Disney Hall, Moneo ot to do the Cathedral [Our Lady of the Angels], and we got to do Caltrans istrict 7 Headquarters: RECORD, November 2002, page 124; November 2003, age 134; January 2005, page 120, respectively]. But local architects are still rely hired for major projects. L.A. remains a place where an architect can eculate on the nature of architecture, however. Business, though, is not volved in the culture of architecture; that's an American issue—the lack of terest in architecture as a force that can respond to cultural, social, and political problems so important in this moment of history.

R: *Would you then say L.A. is mature, meaning it faces different set of issues than a young, fast-growing city does?*
M: It's still an incredible nurturing ground for young architects because its dispersed nature, the huge number of small-scale buildings. There is singular sense of what architecture is "supposed to be," as there is in Boston or San Francisco. So it is open in the way it was in the years of Neutra and Schindler.

AR: *The L.A. Now project you spearheaded [*RECORD*, November 2003, page 128] drew a picture of the city that seemed to transcend the clichés of Hollywood and car culture.*
TM: It tried to deal with what I saw as a passivity and a lack of speculation about what the area could be. The project was to initiate interest in the city and to initiate potential. This is literally an infinite, unknowable place. I am fascinated by that unknowability and how it triggers a wellspring of possibility. That's the basis of any new architecture.

AR: *Aren't there two opposed visions of the city's future in Mayor Antonio Villaraigosa's focus on density and transit versus Governor Arnold Schwarzenegger's plan to add massively to the highway system?*
TM: I don't sense a critical mass developing to solve the traffic problem. The density of the city has seemed to reach some critical point in the last three years. From Santa Monica, where I live and work, it can take an hour and a half to get downtown. It should be a 12-minute drive. You no longer have the freedom that you used to have.

AR: *How does the decline in mobility change the city?*
TM: It challenges the 1950s L.A. aspiration to unfettered movement. This is now a horizontal city made up of 134 towns that spans just under 100 kilometers, and nobody has really thought of this place in terms of organizing it on that scale. Some kinds of self-correction will happen. In downtown, where there never was a residential population, people are moving in for these prag-

> L.A. will become a very ethnically and racially blended city. Some people say that we'll all be at each others' throats, but I don't think that's true. People can still realize a dream of living something close to the American way of life in a huge city. —*Joel Kotkin*

matic reasons. Some 40 projects are in the works.

We don't have as many options as a centralized city like New York does. Subway and bus systems operate in a very different way in a multicentered city that lacks density. When the subway is completed between downtown and Santa Monica, Wilshire and Santa Monica Boulevards may build up as high-density linear cities. Multiple hubs will aggregate large numbers of people and connect through infrastructure pieces. What happens in between will be interesting. These are vastly different choices than we've confronted.

AR: *Does L.A. actually need a traditional downtown?*
TM: It does not need it to be the singular center of the metropolis. It is one of seven, eight, or nine nodes, including Pasadena, Long Beach, and big chunks of Orange County. To become whole it needs to have a residential population because it already has investment culturally—in Disney, the Museum of Contemporary Art, the Ahmanson Theater—and politically. In Long Beach or Pasadena, you see the same migration away from the Modernist planning that isolated, say, residential from commercial functions.

AR: *What should L.A. be doing to define its future?*
TM: It should be looking at how Madrid—where we're working on a huge planning project—does it. The Urbanización Río Manzanares is a partnership between the city, the public realm, and the private sector. The mayor is intimately involved. That's what it takes at such a scale. Americans need to ask how this can be brought home.

JOEL KOTKIN,
Author of *City: A Global History*,
San Fernando Valley

AR: *What does Los Angeles mean in American culture now?*
JK: It originated the way cities in America and the world are evolving. A lot of cities don't want to be "another L.A.," but are becoming another L.A. It is absurd for Denver to try to become Boston. The fact that 85 percent of the population wants to live in a single-family house tends to lead cities in the L.A. direction. Most people continue to move out in this polycentric way, seeking affordability, good schools, job opportunities. Phoenix, Houston, and Dallas evolved in more of an L.A. style than a New York one, and so downtown has a fraction of the overall population base. L.A. is the first case study of the polycentric city.

AR: *But isn't the reason cities don't want to "become L.A." because of its traffic, pollution, and high costs?*
JK: In many cases a city is better off embracing L.A.'s positive attributes and working against the negatives, rather than trying to reinvent itself as New York. One of the things the city should try to do is work with its polycentric nature. L.A. has historically attempted to build lots of housing and wait slowly for economic and cultural institutions to pop up on their own. That pattern creates huge stress on the freeways because everyone has to go so far. Also, the city is so huge, it's very hard to manage, and it's very hard to develop a sense o community because it is so many places. It does not have a strong consciousness of itself as a city. It may be better off being several smaller cities o breaking itself down to effective borough units.

AR: *Does Los Angeles still incubate ideas and trends?*
JK: For better or worse, Frank Gehry is among the most influential architects, and he operates out of L.A., as do Thom Mayne and others. So much of building i L.A. is privately inspired, whether the houses, the Petersen Automotive Museum the Geffen Contemporary [gallery of MOCA], Disney Hall. They are all iconic unto themselves. They reflect what L.A. is, an individualist city, not a collectivist city even though it has collectivist politics. You don't have to hang out in the street o be out in public, because you hang out in private. The personality of the city therefore, is phlegmatic and a little bit eccentric. My neighborhood is filled with Persian palaces, expressions of someone's dream from Israel, Persia, or Armenia that they couldn't realize elsewhere. Instead, they plant it on this strange soil.

AR: *But it now seems a very different place from the city that was once filled with Midwesterners and built up with cottages with fruit trees planted in the backyard.*
JK: I think L.A. is urbanizing, or reurbanizing, but in a disparate way. Th Miracle Mile, Los Feliz, Santa Monica, and Pasadena are sparking a very L.A urbanism. These districts have apartments, but they are not far from privat homes. And they attract people from surrounding suburbia. Studio City an Sherman Oaks work that way for the Valley.

AR: *What to you think are the implications of Robert Bruegmann's claim i his new book,* Sprawl: A Compact History, *that L.A. has become America densest metropolitan area?*
JK: That's a little bit misleading. You don't have density like Manhattan, n even close, nor San Francisco. Like Toronto, Los Angeles has dense spraw and it's certainly getting more dense over time.

AR: *What does the big change in the racial and ethnic makeup of the city portend?*
JK: It's been changing in this way for 30 or 40 years. Dallas, Houston, Atlant Phoenix, Charlotte, and Las Vegas are taking on the same characteristic

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Downtown need not be the singular center of the metropolis. Multiple hubs will aggregate large numbers of people and connect through infrastructure pieces. What happens in between will be interesting. These are vastly different choices than we've confronted. — *Thom Mayne*

They look like L.A. 20 years ago. It's another example of how L.A. was an original. It was the first great sprawl city to become an immigrant city, with the possible exception of Miami.

AR: *Is there some place in the city that's emblematic of its character now?*
JK: It's hard to say anything is emblematic because the place is made up of so many little cities. I'd go to a strip mall in San Gabriel or the San Fernando Valley and listen to the languages and look at the kinds of places it's rented to. You may see a Chinese seafood place, a Filipino restaurant, a Mexican restaurant, and a clothing store catering to young Hispanics. That kind of eclectic mix is found in almost every area of city. That's what's emblematic.

AR: *What's L.A.'s future?*
JK: L.A. will become a very blended city. Some people say that we'll all be at each others' throats, but I don't think that's true. You do not think twice about going to a Mexican restaurant or a Middle Eastern restaurant and finding blacks and Hispanics and Asians all eating there. The future is much more hopeful in that sense.

AR: *What can other places learn from L.A.?*
JK: To build strength from the way the city evolved, rather than to perform radical plastic surgery. In other words, if you are a multipolar city and your great asset is the weather and what can grow here, and you are spread out, then build on that and make it work. If you are New York and being compact is your great strength, you build on that. Our diversity is another strength. People can still realize a dream of living something close to the American way of life in a huge city.

FRANK O. GEHRY, FAIA

Principal, Gehry Partners, Los Angeles

AR: *You are held up as an example of how Los Angeles has been able to foster new talent. Is that still the case?*
FG: It's easier to try new things here, because we use an inexpensive stick architecture. You don't have to be in the spotlight; you don't have to be self conscious. I don't think that's possible in New York, for example. In some sense, everyone is in everyone else's business. It felt claustrophobic to me.

AR: *So architects can develop here because they can fly under the radar?*
FG: It's still okay, here. I'm under scrutiny, but the younger guys are not. New York is more intense.

AR: *The big project in Los Angeles nowadays is Grand Avenue, covering several blocks next to Disney Hall, which you are master planning. Is this a way to rethink the nature of Los Angeles?*
FG: Grand Avenue is an opportunity, but it's not there yet. L.A. has yearned for a long time to have a downtown like San Francisco or eastern American and European cities. But it wasn't built that way. It's an automobile city, spread out. It doesn't have a center, and so people use little mini centers close to where they live.

AR: *Does this mean you are trying to deliver what some have called a 19th-century downtown?*
FG: Our client wants to build hotels, condos, a market, stores, and restaurants. That's not enough pieces to make a downtown. Disney Hall, the Chandler Pavilion, and MOCA form the beginning of a cultural enclave; we're trying to connect the development to it and pull it all together. You start to build a DNA into the project that has some attraction over time, that creates relationships. It shouldn't mean that it must be guaranteed to go a certain way. The next phase could be by Thom Mayne.

AR: *Is this an opportunity to redefine what downtown is?*
FG: There's no consensual understanding of what the downtown should be among the city, county, and the developers. If such a consensus existed, you'd know what parameters you are working with. So you have to speculate.

AR: *In Berlin's DG Bank project [RECORD, October 2001, page 120], you worked with very tight urban-design constraints on Pariser Platz.*
FG: You don't have to go to such an extreme. There's a lot of room between that and what L.A. has. If you look at the buildings around the Pariser Platz now you can see that they are all different. The controls didn't work. I don't think it's possible to legislate that stuff.

AR: *Is there some part of the city that represents 21st-century L.A. to you?*
FG: Look at Ventura Boulevard. It evolved since the war into a commercial district that's the center of the San Fernando Valley. Every kind of building is there. The constraints—of budgets and so on—left a kind of consensus about materials and form that's visually quite coherent. It's exhilarating. The buildings weren't legislated. They were affordable, what you could get. It's not architecture, it's not sophisticated, and nothing other than an expression of 30 years of people living out there, creating this place haphazardly under the auspices of democracy. I think in 10 years there will be a committee to protect its character.

AR: *That answer suggests that architects aren't essential to the creation of an exhilarating place.*
FG: I don't know. It's not that it's so good, though you can see Schindler sub-

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Los Angeles could become the perfect example of how a city should evolve and how it should be sensitive to possibilities. Ethnic communities are becomin more cohesive and developing a stronger cultural impulse while building bridges to other communities. — *Richard Koshalak*

sumed in it. But it is exhilarating like Las Vegas is. You don't understand it.

AR: *How do you see the future of L.A.?*
FG: I guess it is self-serving, but I wouldn't have thought 10 years ago that Frank Gehry or Thom Mayne would be doing major commercial projects in downtown L.A. That opens the door to people like Michael Maltzan and Kevin Daly. Optimism has always been a key aspect in architectural history here.

RICHARD KOSHALAK,
President, Art Center College of Design, Pasadena

AR: *What kind of place is L.A. today?*
RK: The city has changed and continues to evolve from a suburban culture to an urban culture. It's becoming a much more cosmopolitan place, which has to do with the influx of international populations from Latin America and elsewhere. These new immigrants have a strong belief in democracy and the kind of social mobility that is possible in a democratic situation. Out of this diversity, we're evolving new kinds of public space, which is extremely important now. That's why we're seeing the Great Park in Orange County that Ken Smith will design and the large commitment to open space along the Los Angeles River, on the site known as the Cornfield. There will be a new commitment to public transit.

AR: *Does such a privatized city need so much public space?*
RK: It can be part of responding to catastrophic earthquakes, as a place of refuge. It has to do with the water-shortage question and the city's impact on the natural environment, which is massive. That's an important subject for architects, especially with the explosion of population that we expect to continue here.

AR: *Aren't lots of people still moving to the edge and beyond?*
RK: That trend to suburban communities is reversing. The distances are too great, the commutes too difficult.

AR: *How is the city responding to such a wave of change?*
RK: A lot of leadership is coming from cultural and educational organizations. We have to be civic leaders and catalysts for change. The forces of change are politics and political leaders. It's also our responsibility to share expertise if we're going to see higher levels of architecture. Caltech [California Institute of Technology] has commissioned Thom Mayne to do the astrophysics building and Rem Koolhaas to do one for computer science. At the Art Center, we're using Frank Gehry, Kevin Daly, and Craig Hodgetts. The Jet Propulsi Laboratory has commissioned Michael Maltzan for a new administration buil ing. All this is just in Pasadena.

AR: *Is this a new way to convene leadership?*
RK: Educational institutions can create the future, but that future has be discussed with the public. Architecture could take on a whole ran of responsibilities.

The L.A. Now project, in which we crossed disciplinary lines and sch lines, involved the University of Southern California, the University of Califor Los Angeles, and the Arts Center. Just as we did a "wall-less classroom" that project, we'll do one to deal with the impact of a major earthquake Los Angeles. We'll launch it by creating a new kind of Times Square, a hu signage system in a parking lot downtown. It will be devoted to education purposes rather than entertainment purposes. It's a way to get ahead of t curve rather than to wait for "the big one" to happen.

AR: *Is Los Angeles a mature place now rather than a trendsetter?*
RK: We recently came back from a meeting at USC. The people in the neig borhoods surrounding the campus used to be black. Now they are who Latino. Serious demographic change happens almost overnight. Designers have to cope with greater uncertainty.

AR: *The mayor has a vision for more transit while the governor seeks to expand the highway system. Isn't this a collision of visions for L.A.'s futur*
RK: Integrating transit will surely be an issue. We can't continue to spread a city, so we'll be looking at new forms of housing downtown. We'll evolve multiple urban centers with greater connectivity between them.

AR: *Would you say there is one place that's emblematic of what L.A. is becoming?*
RK: Disney Hall has had a huge impact on downtown L.A. It has rea changed the focus of the city from decentralized to centralized.

AR: *What else should Los Angeles be doing to define its future?*
RK: It could become the perfect example of how a city should evolve and h it should be sensitive to possibilities. Over 100 languages are spoken in t school system. Ethnic communities are becoming more cohesive and devel ing a stronger cultural impulse while building bridges to other communities.

AR: *So people aren't leaving these ethnic enclaves as they gain in affluen*
RK: There's a Japanese-American cultural center and new housing being b in Little Tokyo with a new emphasis on mass transit. The whole city is focusi on living with greater closeness and connectivity. ■

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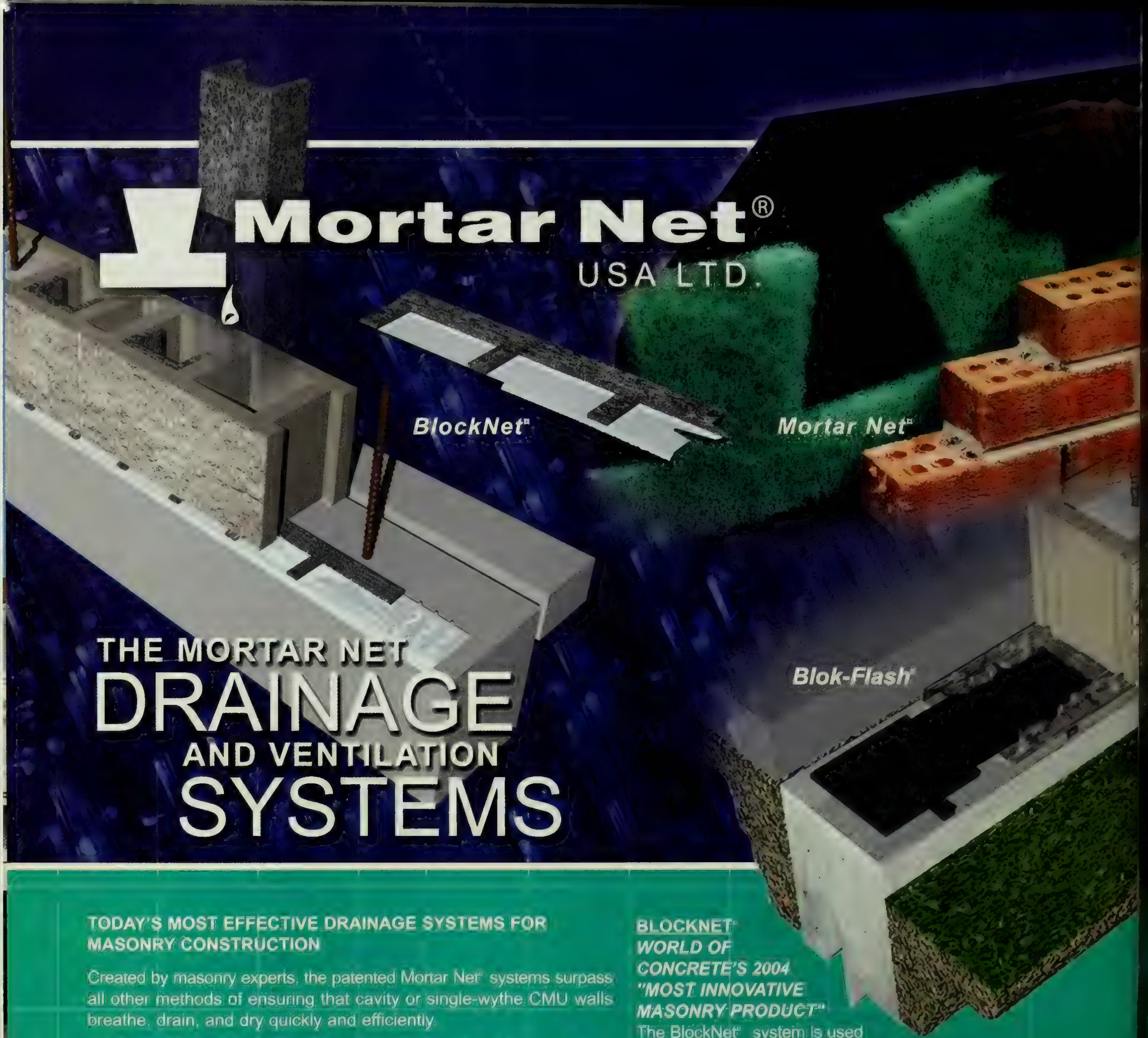

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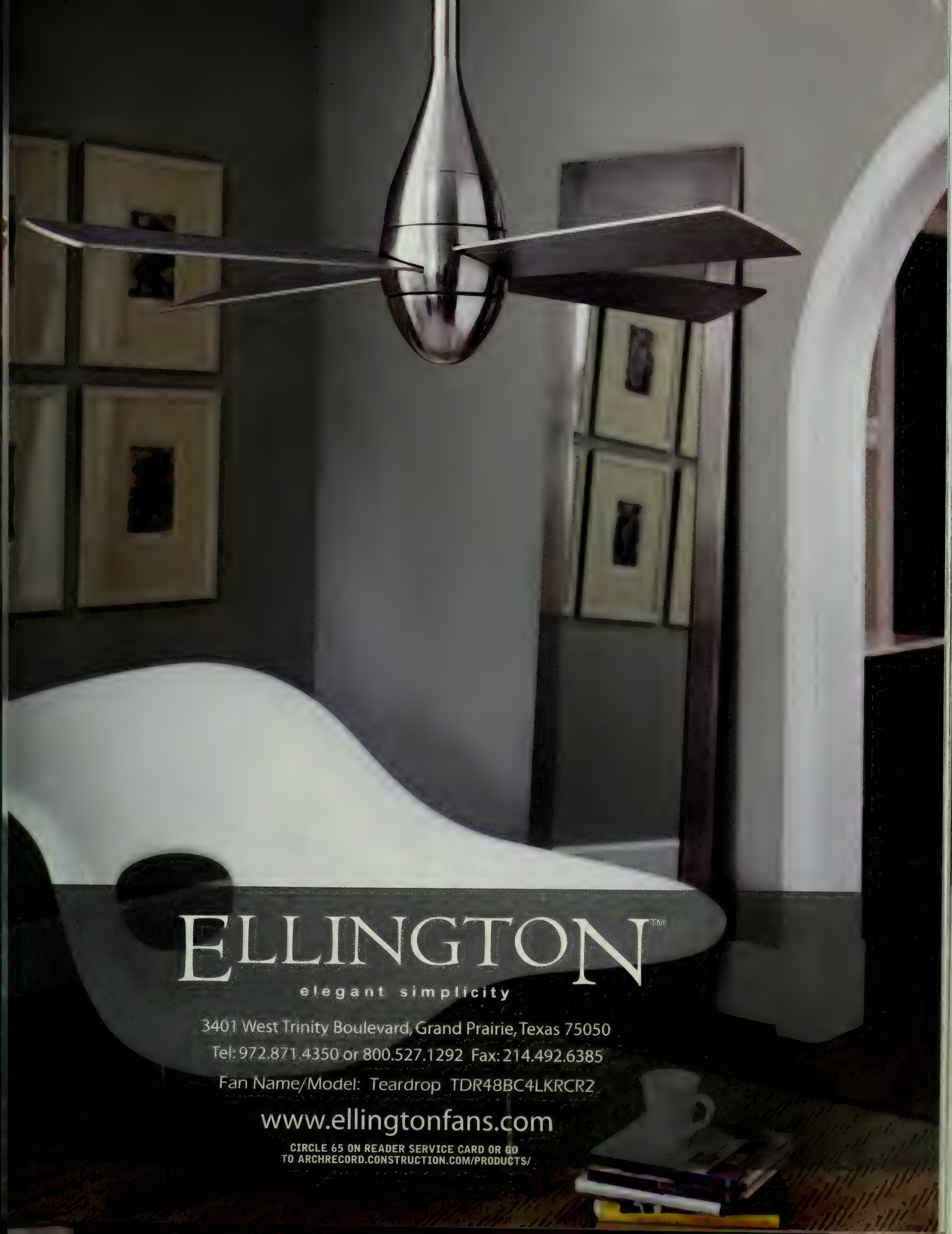

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When worlds collide in today's **Los Angeles**

ly Robert Ivy, FAIA

The Hollywood lens continues to shape our contemporary viewpoint, saturating today's people, places, and buildings with Los Angeles chroma. For ARCHITECTURAL RECORD, the cinematic city demands not one story, but an entire issue. The critical ıetaphor for the contemporary architectural scene rests in a recent .cademy Award winner.

In the film *Crash*, which the critic David Denby called brazenly alive," multiple plots and people interweave in a sort of homage ı degrees of separation. The movie follows the harrowing events of a ngle warm California day from multiple perspectives, in which charac-:rs, their lives and automobiles, crisscross through traffic, careening off ach other like bumper cars. With a kind of wide-eyed wonder, the film hronicles the difficult reality of the kaleidoscopic, polycentric city nonareil that is Los Angeles.

The city's architecture reflects an equally refracted point of view: ow else to pin down a place so intensely spread across mountain and alley, so variable, so spiced and insistent? As in *Crash*, the cast of charac-:rs in L.A.'s architectural drama defies easy typecasting. Two of its most rominent senior representatives, both revered Angelinos, stand out for ıeir strong contributions to American architecture, maneuvering alifornia's architectural freeways, while influencing younger designers ho have filled the hills and valleys with their work. While one may be etter known internationally, both have changed L.A. Their paths may ave been individual; their routes, complementary.

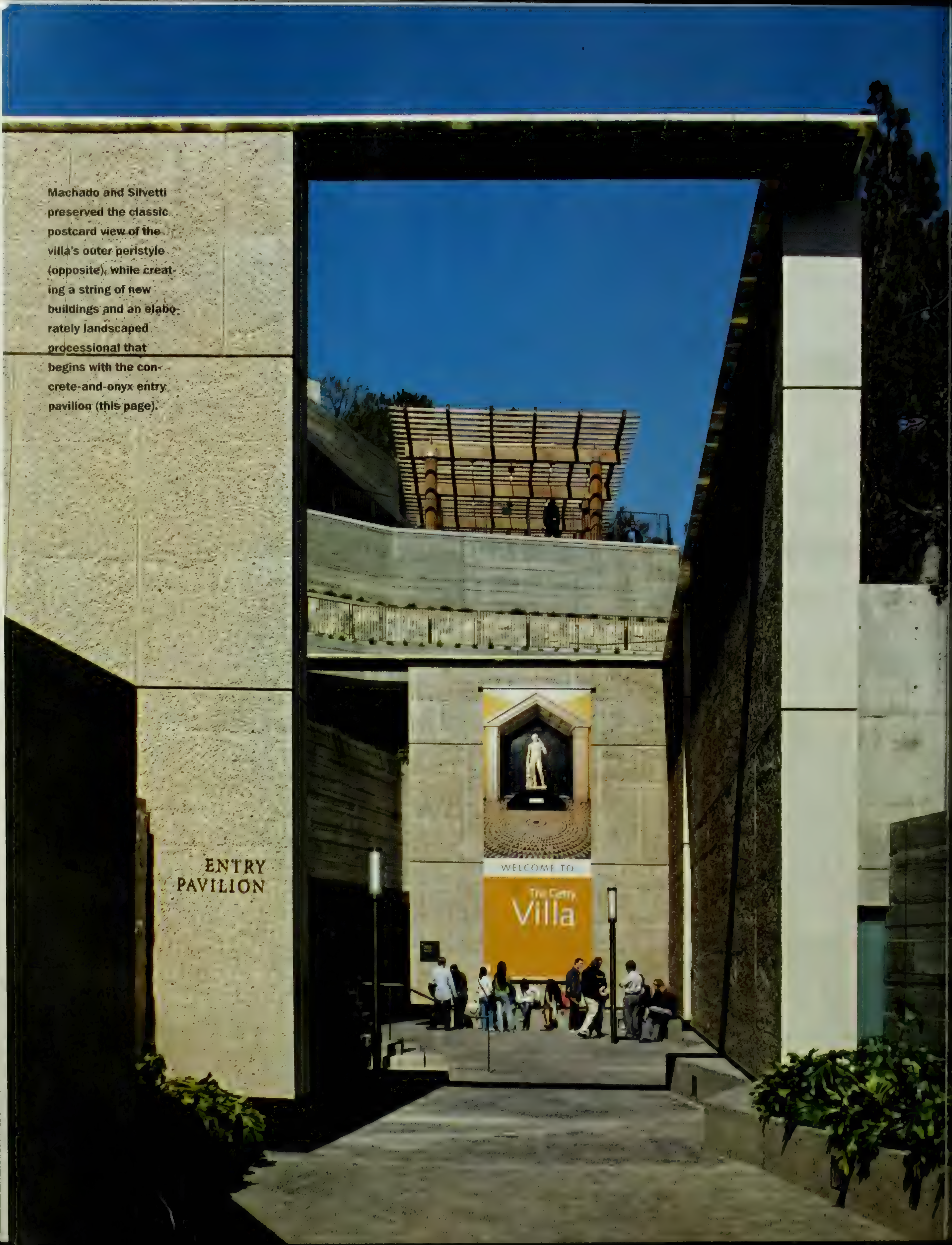
The stellar work of Frank O. Gehry, FAIA, for instance, has volved from a professional oeuvre characterized by projects for realorld, commercial clients and developers through his well-documented ıain-link era to the more expressionistic work that we recognize today. hough he has taught at Harvard and Yale, and his own studio has :rved as a kind of teaching laboratory for young architects, the world ıows the architect by his signature buildings.

While it might be convenient to pigeonhole Gehry today as the by-product of the L.A. art scene who went on to create sculptural structures, contrary to preconceptions, Gehry studied urban planning at Harvard and is currently forging a role as an urbanist, with plans afoot for Grand Avenue in Los Angeles and for downtown Brooklyn. Gehry, first associated with flat Venice, California, is now traveling internationally: The practicing teacher has gone from the individual building to the street.

Ray Kappe, FAIA, a founder of two schools of architecture (first chairman of architecture at California State Polytechnic University, Pomona, and SCI-Arc, in Los Angeles, where he served as director until 1987), has helped shape the careers of generations of younger architects from the university to the construction site. Kappe, who has always professed a love of real building and has constructed many of his own projects, has shown the idealistic young that theoretical ideas find true expression in building materials and in details. Grounded in the work of architects like Greene and Greene, Wright, Irving Gill, Neutra, and the California school of later architects like Rafael Soriano and Harwell Hamilton Harris; informed by ideals that we now label as "sustainable"; reverent of tectonics and the telling detail, Kappe has affected the work of a galaxy of starry architects. His home, an iconic L.A. residence, embodies the best of his ideas, with its interlocked spaces articulated through post-and-beam construction. Nature shows through in all his construction: Kappe, up on the mountains and hillsides—professor, builder.

Though Gehry and Kappe, both teachers in their own way, may not literally have crashed their automobiles, they've spent professional lives interlacing their work, their students, and their structures throughout their adopted hometown, in high and low land. It's a big place now, populated by newer generations who know each other, work out their own ideas, yet continually collide, with heat and light, dynamism and energy as the by-products. The newer cast has had strong leading architects as role models.

Crash. The current metaphor for L.A. ■



Machado and Silvetti preserved the classic postcard view of the villa's outer peristyle (opposite), while creating a string of new buildings and an elaborately landscaped processional that begins with the concrete-and-onyx entry pavilion (this page).

Machado and **Silvetti** creates an elaborate new setting that shows off the renovated **GETTY VILLA** without irony or apologies

y Clifford A. Pearson

How you approach the Getty Villa determines how you view it. As with history itself, context and perspective shape meaning. Realizing this, Machado and Silvetti Associates envisioned its $275 million renovation and expansion of the villa as a proces-on—through a 64-acre site in Malibu dominated by a rugged canyon, and st as important, through time. So instead of just fixing up the villa—a fac-mile of a 2,000-year-old Roman country house, built in 1974 by the oil coon J. Paul Getty—and adding some new support facilities, the Boston-sed architects designed a small hill town with the spiffed-up villa as its nterpiece. As a result, they have transformed the way visitors approach, perience, and ultimately, understand the villa and the art it houses.

Writing in 1979 of the Getty Villa, Joan Didion stated, omething about the place embarrasses people." The museum's amask-lined galleries of Renaissance and Baroque paintings," its collec-on of trophy antiquities from Greece and Rome, and its re-created (and located) building stirred up "social discomfort" among "the more lightened." Didion took pleasure in the cultured classes' discomfort with e place and noted that "large numbers of people who do not ordinarily sit museums like the Getty a great deal." So much for the critics.

Project: *Getty Villa, Malibu, California*
Client: *The Getty Trust*
Architect: *Machado and Silvetti Associates—Jorge Silvetti, principal in charge; Rodolfo Machado, consulting principal; Douglas Dolezal, Devin Hong, Christopher Keane, Peter Lofgren, Monica Ponce de Leon, Nader Tehrani, sketchbook team; Peter Lofgren, Tim Love, Hani Asfour, Stephen Atkinson, Conrad Ello, Mimi Love, Nader Tehrani, Russell Walker, master-plan team; Tim Love, Conrad Ello, Mimi Love, Bradley Johnson, George Arnold, Jennifer Beningfield; Andrew Cruse, Markus Elkatsha, Jeremy Ficca, Juan Frigerio, Christopher Genter, Christopher Grimley, Steve Hoard, Andrew Ku, Michael LeBlanc, Stephen Lee, Bruce Miller, Mimi Moncier, Jonathan Ramsey, Susanne Schindler, Ted Touloukian, Ricardo Vargas, project team*
Architect of record: *SPFa*
Engineers: *Nabih Youssef and Associates (structural); Arup (mechanical/plumbing); Kocher Schirra Goharizi (electrical); PSOMAS (civil); URS Corporation (geotechnical)*
Consultants: *Denis L. Kurutz Associates and Korn Randolph (landscape); LAM Partners (lighting); Fisher Dachs (theater)*
General contractor: *Morley Construction*

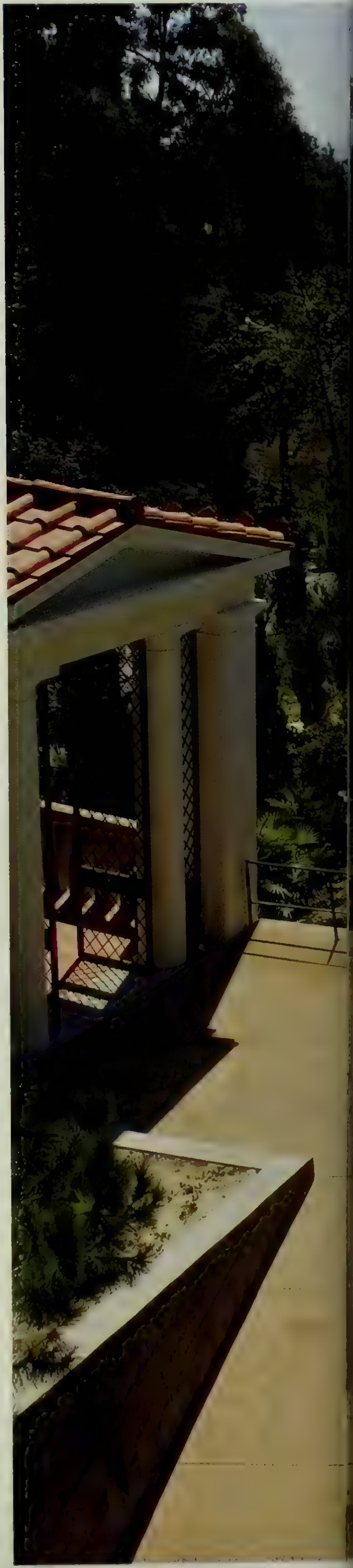
But the critics' views did count, especially after Getty died and his staggering bequest to the museum brought with it enormous resources and a profound hunger on the part of the people running the institution for a commensurate level of respect in the art world. With the opening in 1997 of Richard Meier's Getty Center, 13 miles away in Brentwood, the Renaissance and Baroque paintings and the French furniture collection moved there as well. The Getty Trust closed the villa to renovate and rejigger it as a museum of antiquities. A narrower focus on the ancient world certainly made sense for a building modeled on the Villa dei Papiri, a 1st-century house destroyed by the eruption of Mount Vesuvius. But it wasn't really enough to legitimize the mock villa in the eyes of art-world cognoscenti.

Machado and Silvetti, hired in 1994 to reenvision the villa, quickly realized the philosophical challenge they faced, in addition to the technical, functional, and programmatic ones of creating a museum of antiquities. In a book on the Getty Villa published earlier this year, Jorge Silvetti wrote that in today's culture, "historical replicas have lost most of the educational and artistic value they might have had in previous times." According to Silvetti, "Today, historical, literary, or mythological images are brought back to life in order to be consumed as commodities; they are presented as 'themes' to enjoy rather than as sources of knowledge or as genuine aesthetic experiences." Avoiding "the tempting trap of 'thematization' " was at the top of Silvetti's to-do list in 1994 and stayed there for the 12 years it took to complete the Getty project.

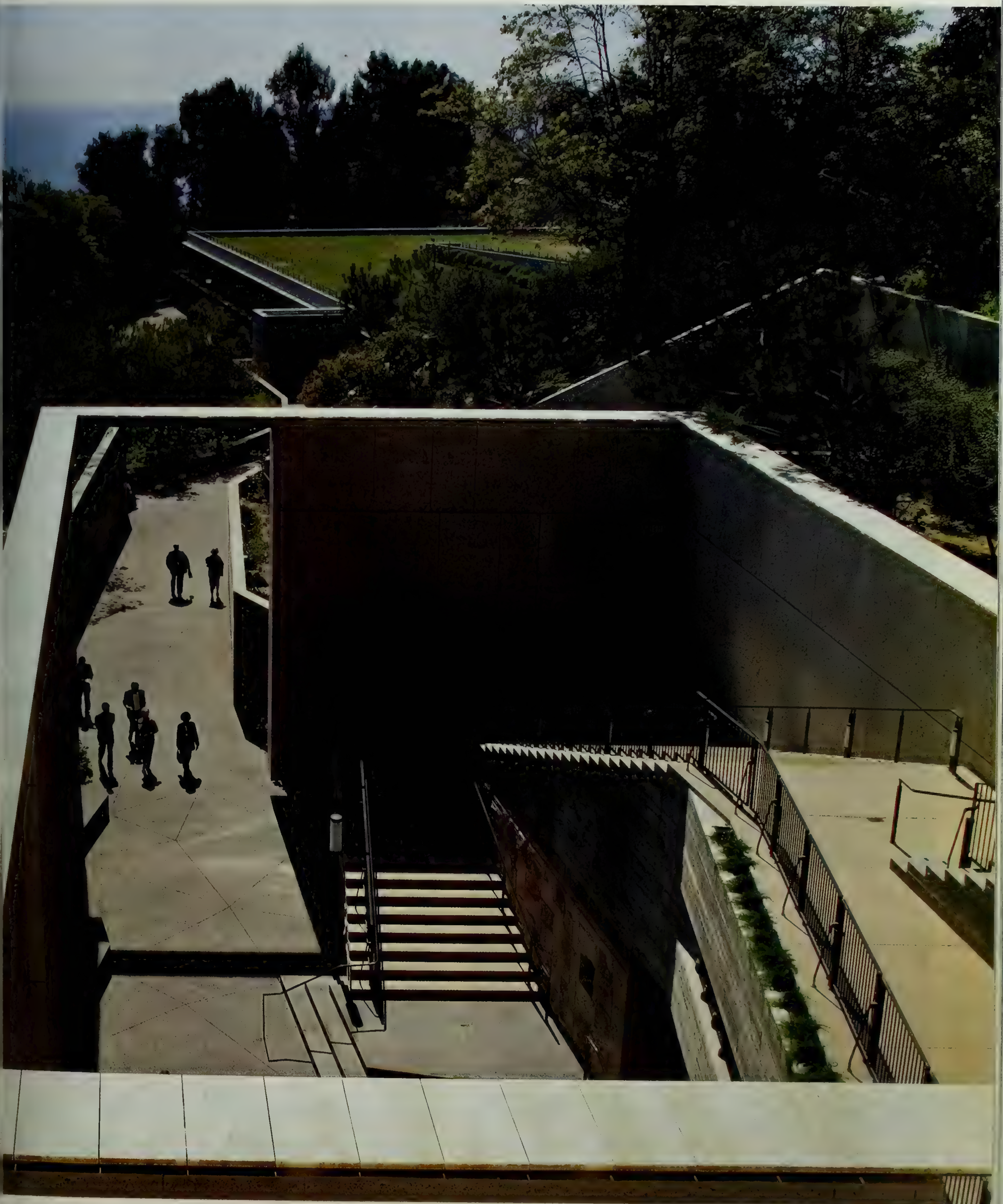
Instead of finding a theme and running with it, Silvetti and his partner Rodolfo Machado tried to retain "the innocence of a replica that had been conceived more as one individual's folly than as a conscious consumerist undertaking." To do this, they needed to place the villa in the proper setting, just as an 18th-century English gentleman might surround a folly on his estate with the right kind of landscaping and ancillary structures. But the Getty Villa's location in a steep canyon and the need for greatly expanded parking, a state-of-the-art auditorium, a new museum shop, café, library, and conservation and research facilities posed major challenges for the architects.

In their initial efforts to fit all the pieces on the site, Machado and Silvetti placed a new parking structure to the northeast of the villa and an outdoor theater in the hills even farther north. In the past, visitors to the museum drove into a one-story garage directly underneath the villa, took a small and inadequate elevator up, and found themselves in the villa's outer peristyle court. The journey from car to ancient Roman courtyard was abrupt, to say the least. To properly introduce visitors to the villa and ease them from the 21st to the 1st century, Machado and Silvetti imagined a leisurely walk around the north side of the villa, past

When the museum opened in 1974, visitors arrived at a garage under the villa. Today, most begin their visit at a new green-roofed garage (at top of photo opposite), then continue through the entry pavilion (opposite), and walk along a path that introduces the villa in a series of vignettes and eventually offers a long view of it (above).

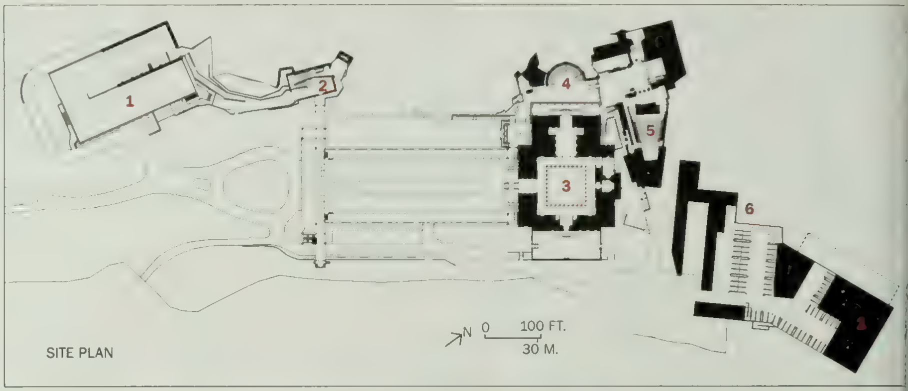


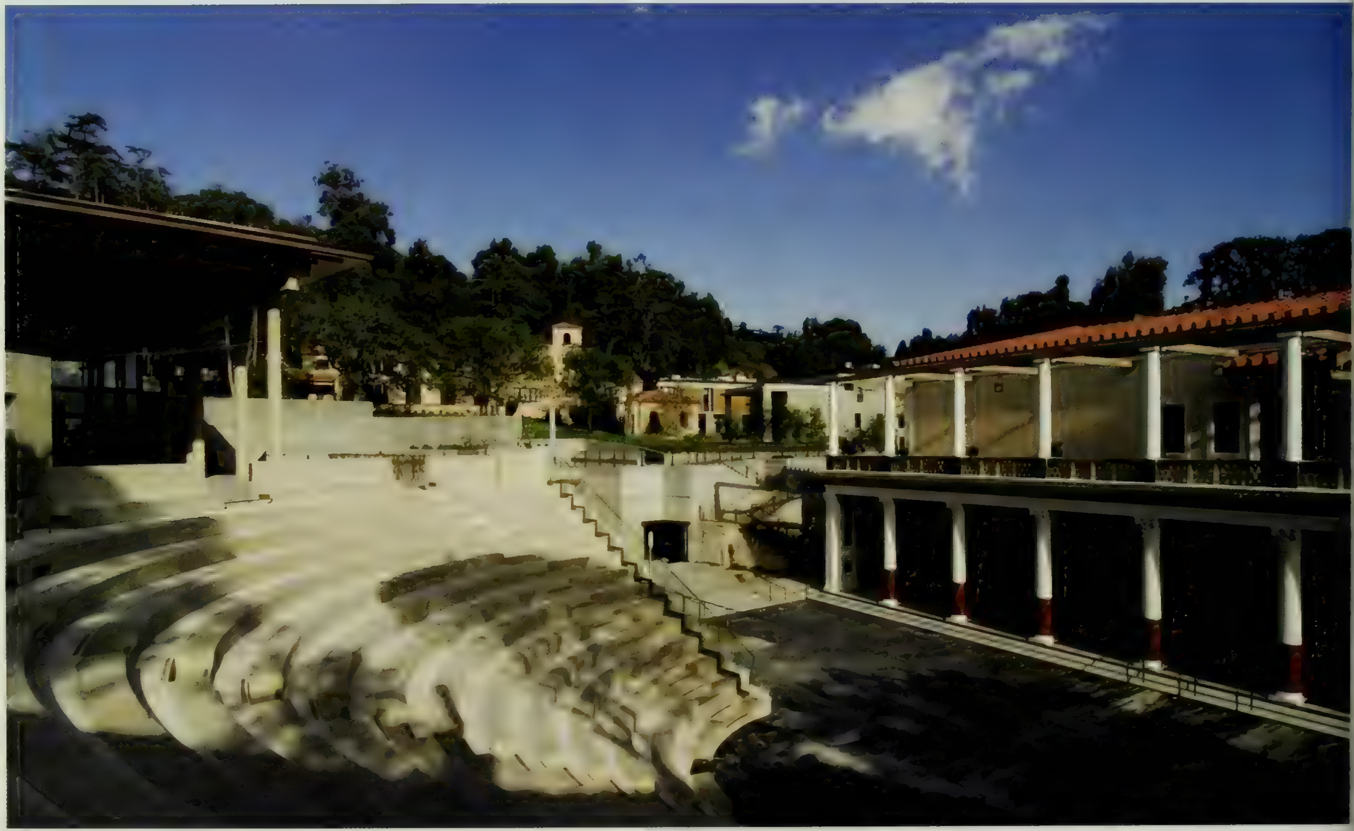
PHOTOGRAPHY: © RICHARD ROSS (TOP)

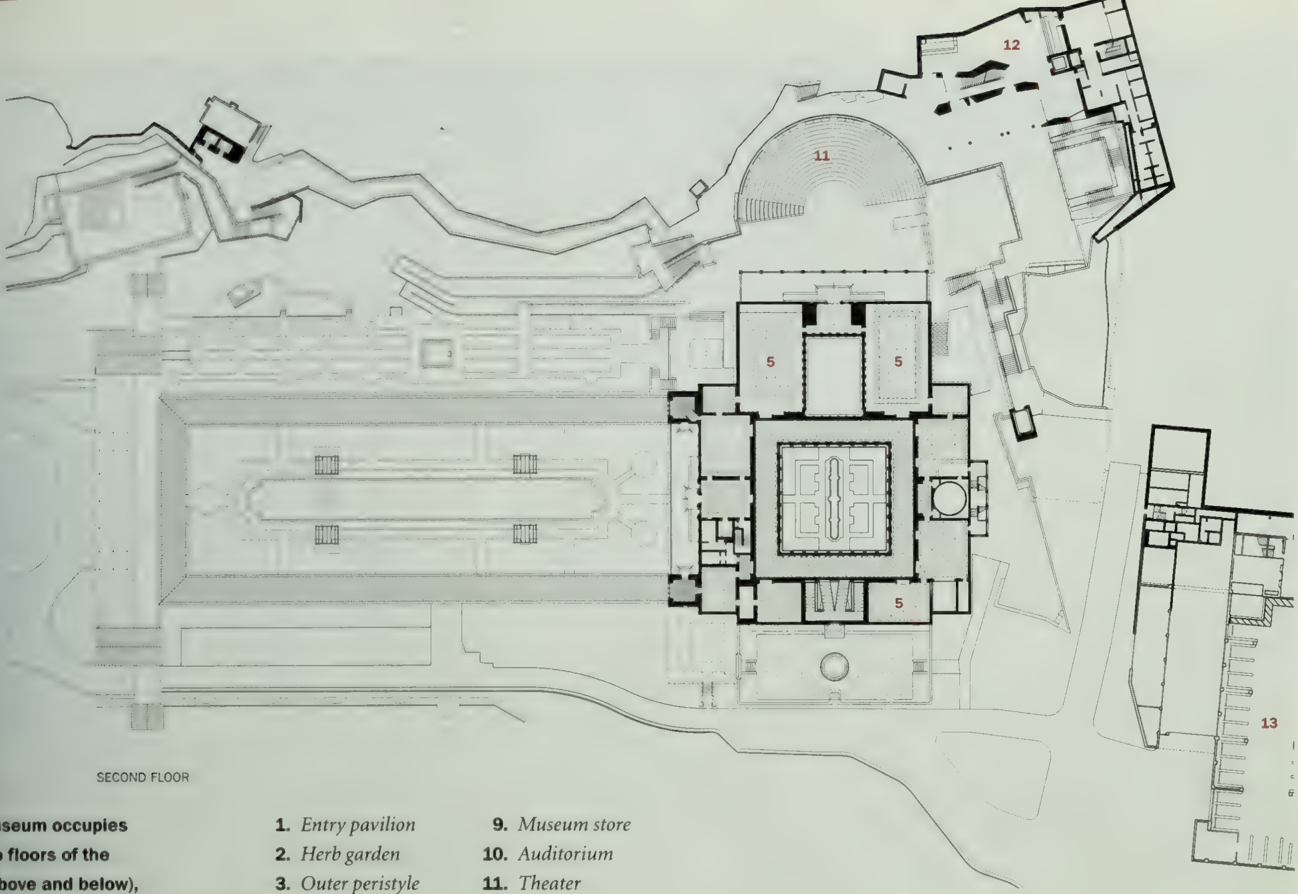


Putting the outdoor theater right next to the villa is historically incorrect, admits Silvetti, but initiates a dialogue between new and (sort of) old (below). Terraces and a shed-roofed café building (bottom left and right) offer ideal places to view the villa.

1. *Parking*
2. *Entry pavilion*
3. *Villa*
4. *Theater*
5. *Auditorium*
6. *North campus*



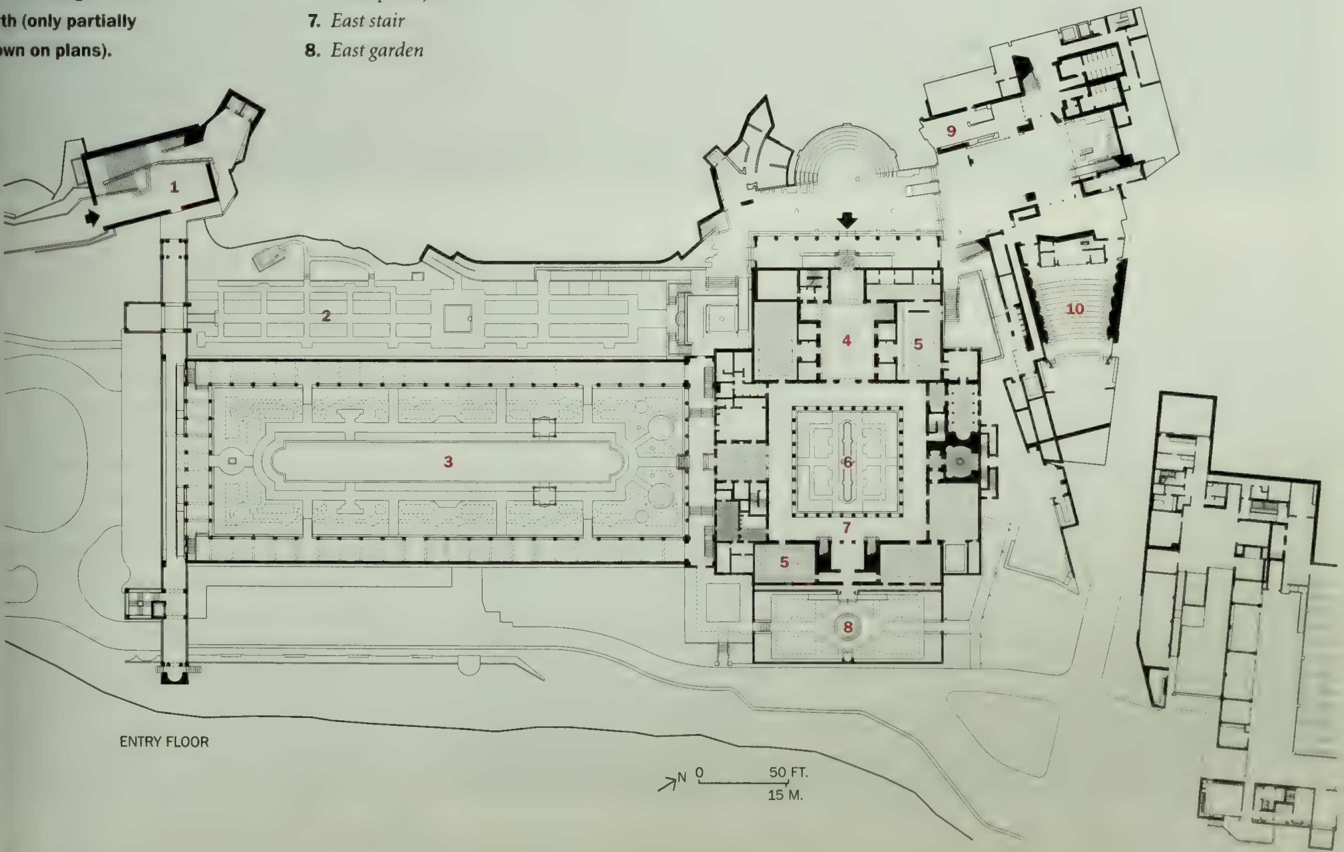




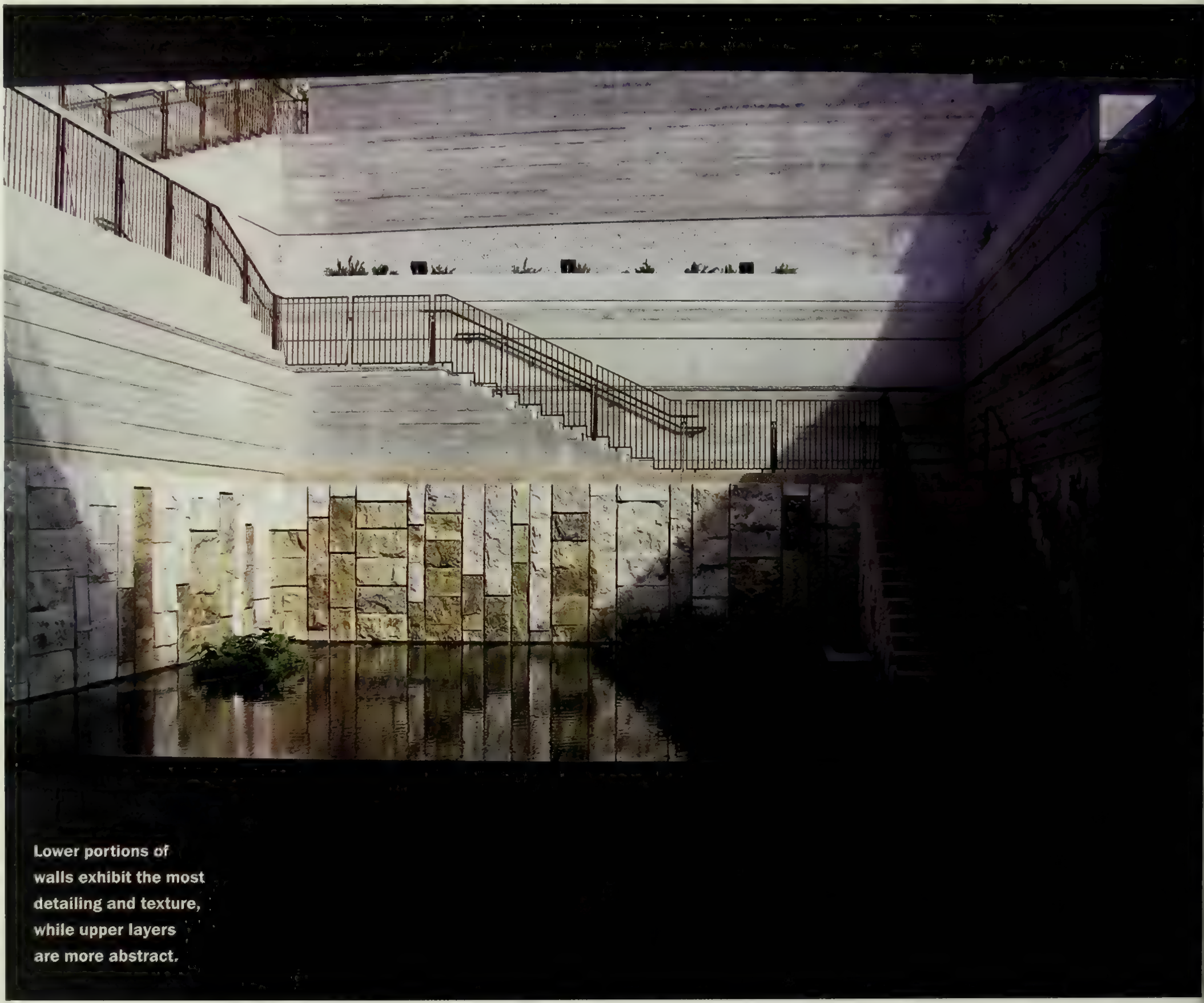
SECOND FLOOR

he museum occupies ıe two floors of the illa (above and below), 'hile research and onservation facilities it in buildings to the orth (only partially hown on plans).

1. *Entry pavilion*
2. *Herb garden*
3. *Outer peristyle*
4. *Atrium*
5. *Gallery*
6. *Inner peristyle*
7. *East stair*
8. *East garden*
9. *Museum store*
10. *Auditorium*
11. *Theater*
12. *Café*
13. *Parking*



ENTRY FLOOR



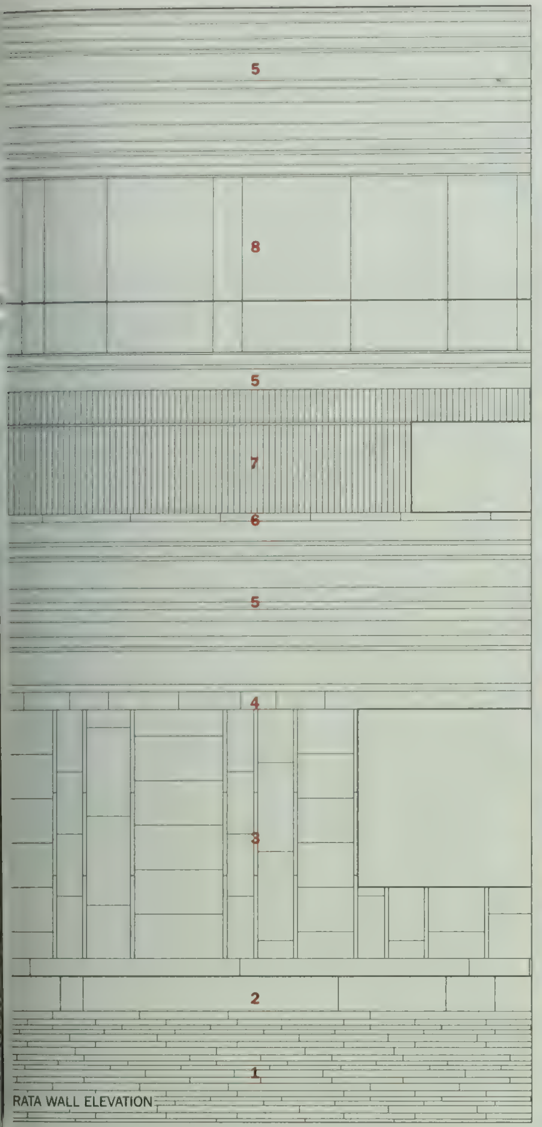
Lower portions of walls exhibit the most detailing and texture, while upper layers are more abstract.

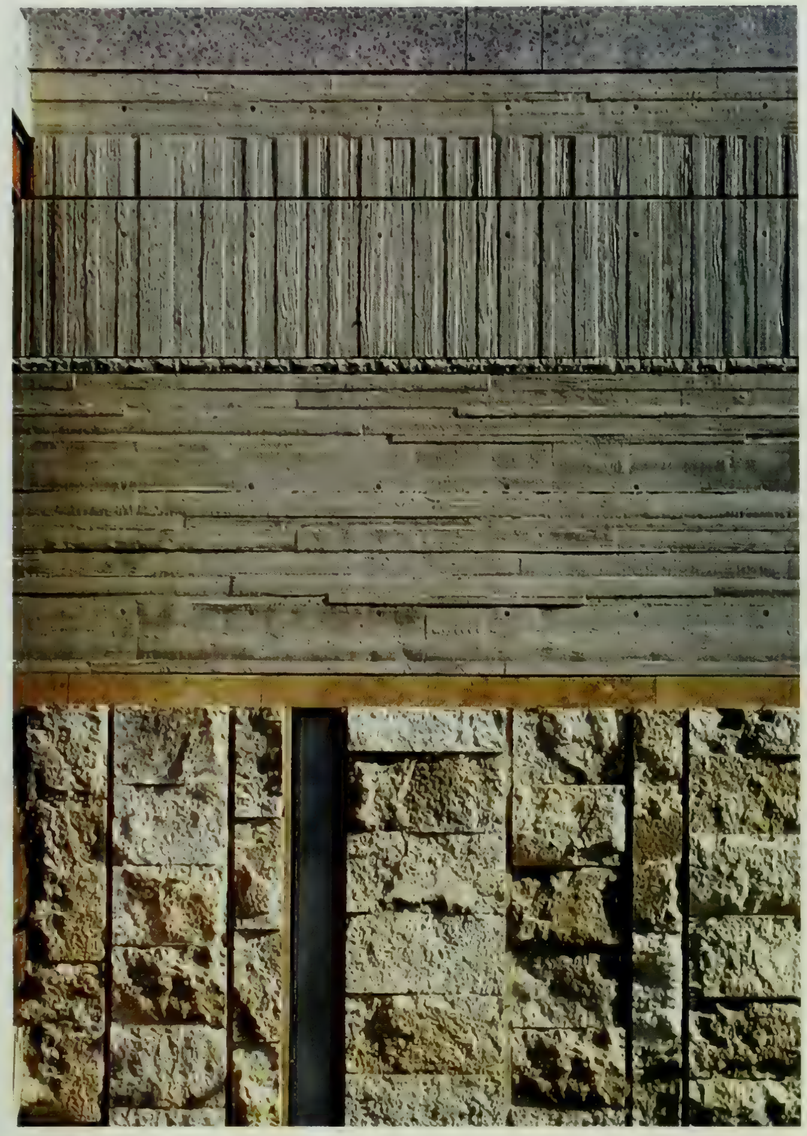
the existing ranch house where Getty had lived, and finally to the atrium at the northwest corner of the villa, where people in ancient times would have entered the house. After touring the museum, visitors could climb the hill or take a funicular to the amphitheater overlooking the villa and the beaches of Malibu.

During the next few years, the architects struggled with changing demands, eventually moving the theater to the west side of the canyon and adding a garage southwest of the villa. In the process, they changed the complex's "center of gravity." But the core idea remained the same: to introduce visitors to the villa slowly in a series of vignettes and let them enter the museum through the atrium. Although they adopted the south-entry scheme reluctantly at first, the architects eventually realized it offered many advantages—such as creating a drop-off area and loggia on the ocean side of the villa and a monumental entry pavilion just west of it.

By pushing most of the new buildings into the side of the canyon, Machado and Silvetti hid much of the structures' bulk and used them as a finely articulated retaining wall. The firm also tied the various pieces together with a meandering path punctuated by stairs, landings, terraces, and scenic overlooks. Starting at the drop-off level at 144 feet above the surf, the path offers visitors small views of the villa and then eventual a grand view of it from above at 208 feet. As they ascend the side of tl canyon, visitors go back in time to the 1st century. To highlight this jou ney, the architects treated the exteriors of the new buildings as "stra walls" whose combinations of expensive stones (black marble, cleft po phyry, Noce travertine), lovingly poured concrete, and fine acce materials (bronze and Afrormosia wood) recall levels of an archaeologic dig. Shifted about 25 degrees from the orthogonal grid of the villa, the ne buildings signal that they come from a different era.

The best of the new is the grand entry pavilion, whose freestan ing, onyx-topped portal frames a dramatic view of the villa looming abo it. "It's a protracted threshold with an Acropolis-like view," says Machad Climbing the pavilion's open-air stair, you sense a charged dialogue betwe one era and another. But as you arrive at the amphitheater and continue the shedlike café building, the architectural conversation becomes mo muddled. Are those columns with their abstracted square capitals suppos to speak a new kind of Classical language or are they modern-day neighbo trying to defer to their elders? It's not quite clear. The outdoor spaces spa ning the divide, however, are wonderful: well-proportioned, urbane plac





Honed China black marble

Ground and acid-etched concrete

Cleft Noce travertine with honed Noce travertine

Honed Noce and bronze channel

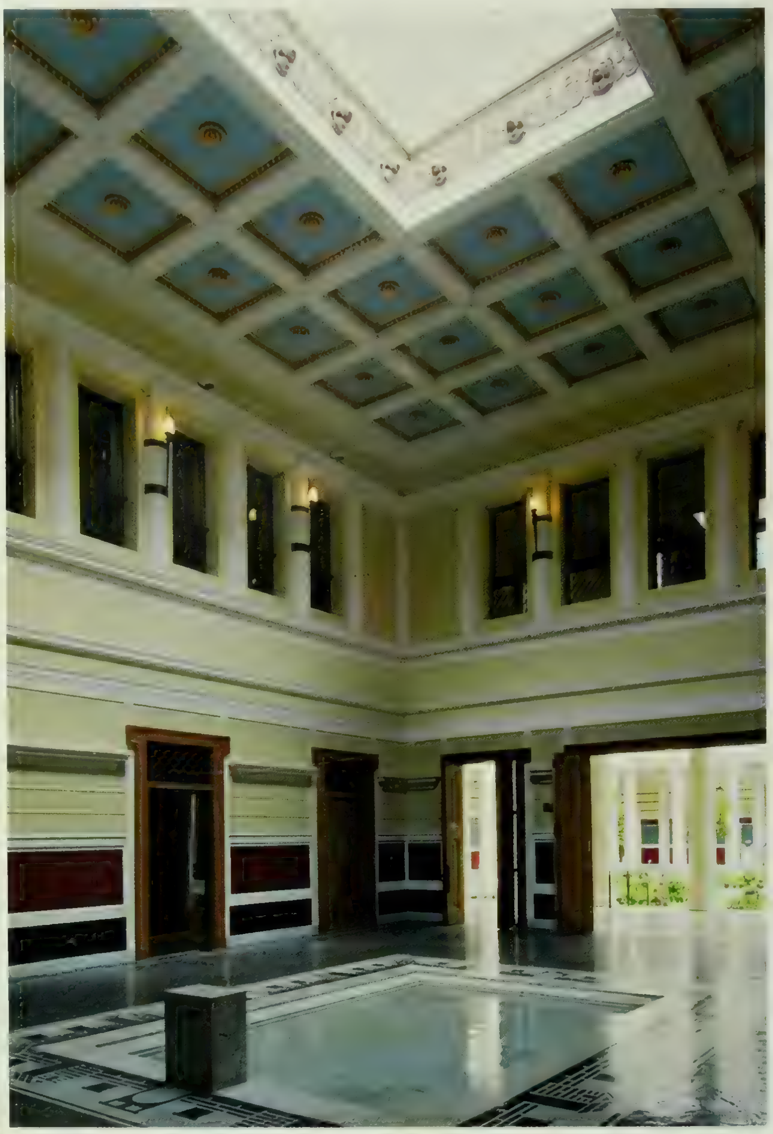
Poured concrete

Cleft porphyry stone

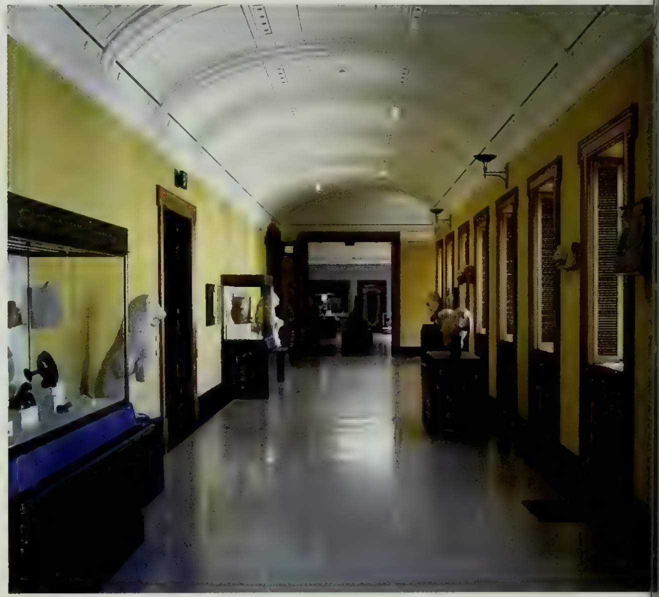
Poured concrete and strips of Afrormosia wood

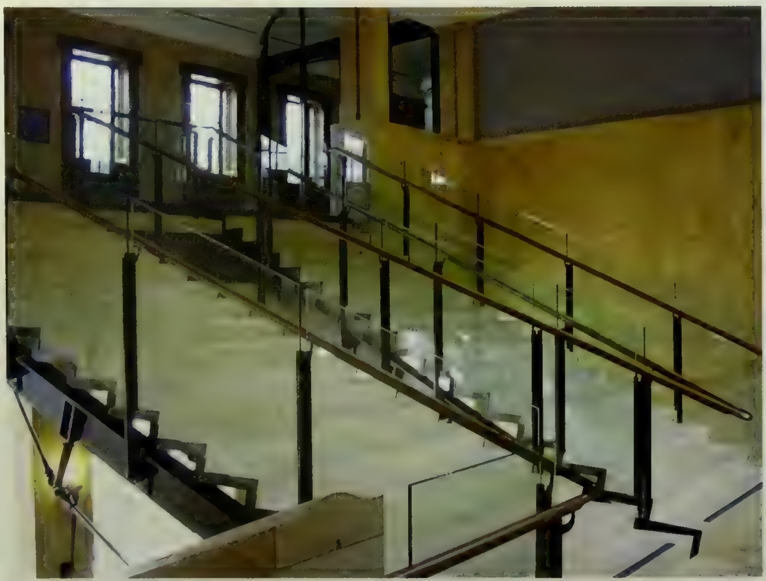
Acid-etched concrete with red aggregate

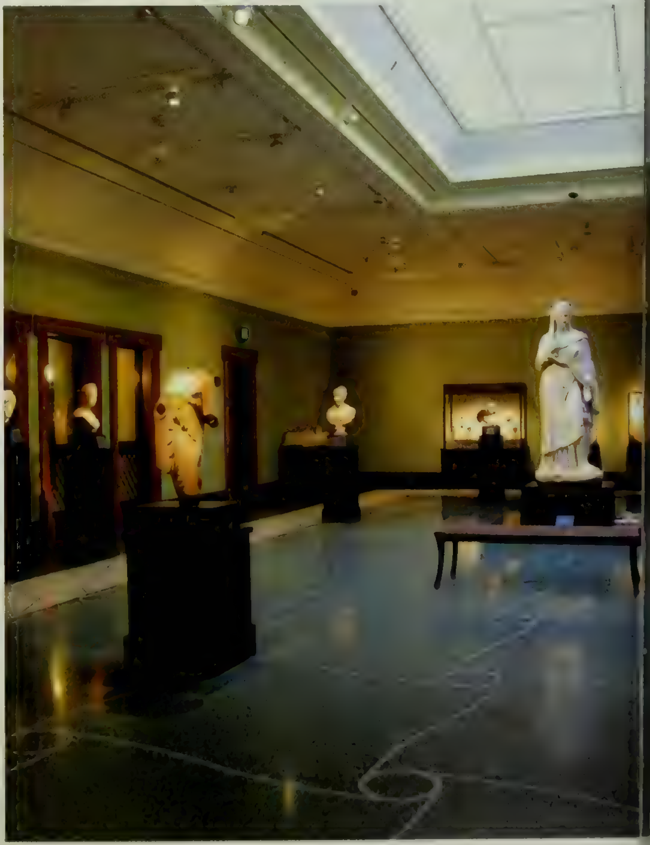
"We wanted to create a syntax of materiality," says Silvetti. While the architects used a consistent palette of materials, they varied the composition with each "strata wall" (drawing above and photo, above right). Black marble from China (right) wraps the walls of a courtyard below the shedlike café building (far right).

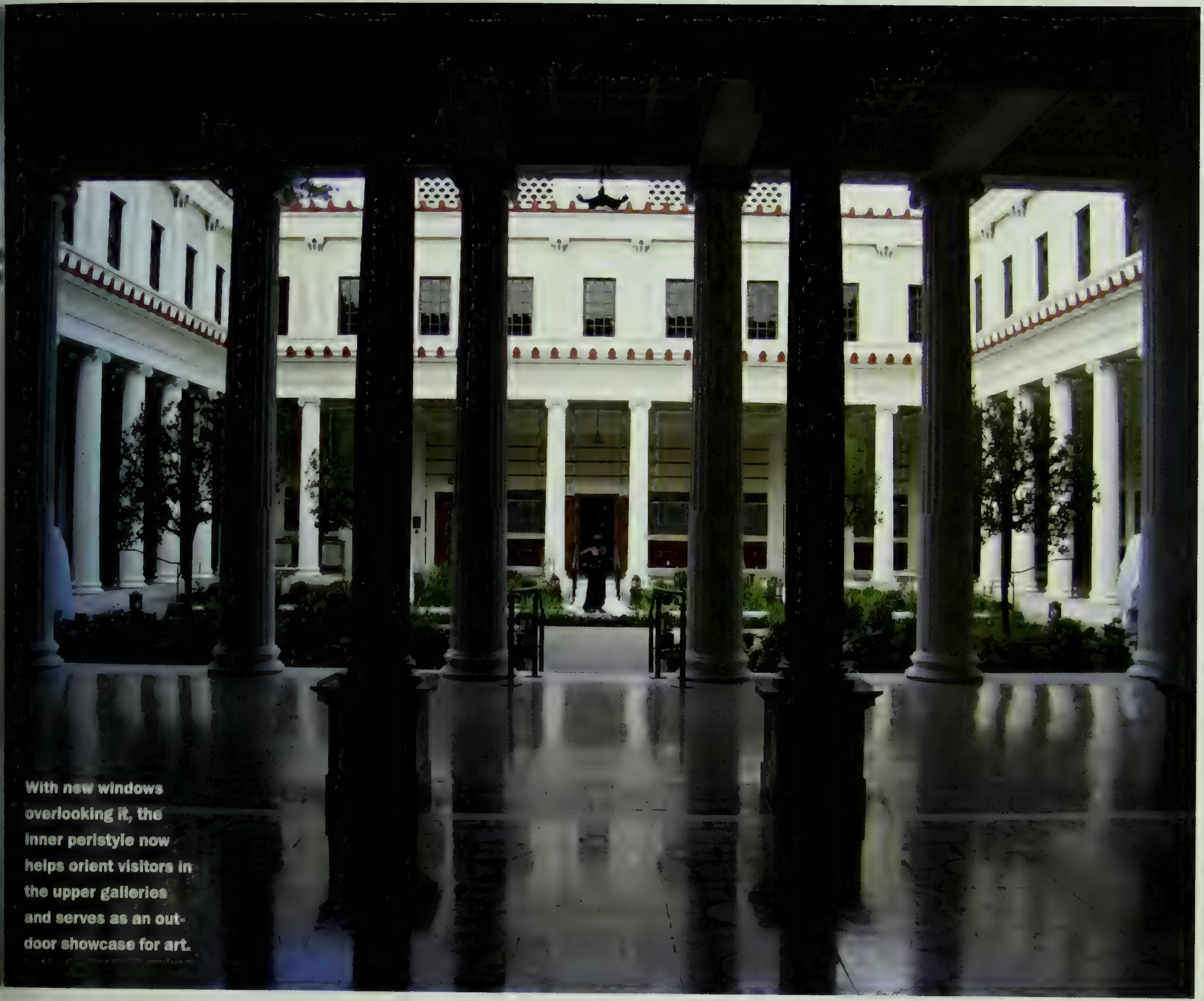


The architects stripped the damask from the gallery walls and added vaulted ceilings to corridors overlooking the inner peristyle (below). They also inserted new windows into these corridors and in second-story spaces around the atrium and installed a retractable skylight above the atrium pool (left). A frankly modern stair connects the museum's two floors (bottom left). New floors, lighting, and skylights in the galleries (bottom) provid elegant settings for the collection's ancie Roman and Greek art









With new windows overlooking it, the inner peristyle now helps orient visitors in the upper galleries and serves as an outdoor showcase for art.

or enjoying a snack, relaxing, or pondering the riddle of restoring a facsim- e of a house that no one in 2,000 years has seen.

As for the villa itself, Machado and Silvetti's renovation delivers a ear miracle—a museum that elicits no smirks from the art world. Without ony or any Postmodern winks, the architects treated the villa as a serious uilding, as "an artifact in a collection," explains Silvetti. First-time visitors robably won't know it, but the architects made major changes—including dding 58 windows to the once-dark gallery corridors around the inner eristyle, opening up the atrium with a retractable skylight, and creating a ries of dazzling stone floors that interpret ancient decorative patterns. They so inserted a frankly modern stair on the east side of the museum, whose posed bronze structure reminds us that ancient Roman houses never had second floor, so there's no 1st-century precedent to use here.

Machado and Silvetti designed all of the display cases and an genious system of power boxes hidden below the floors, which affords rators a great degree of flexibility in placing artworks. That may come in andy, since Italy claims that some of these ancient artifacts were plundered tomb raiders and then acquired illegally by the Getty. Marion True, who ad been the Getty's curator of antiquities until she retired last year, is currently standing trial in Rome for such acquisitions. But for the time being, the art she helped bring to the Getty looks smashing where it is.

As every jeweler knows, the setting is as important as the jewel, especially if the rock turns out to be cubic zirconia. Machado and Silvetti has done a masterful job with the Getty's setting, crafting a sophisticated ensemble of buildings, plazas, and landscaping that finally provides a real home for a relic of another time and place. ■

Sources

Bronze curtain wall: *Custom by Berger Iron Works*

Precast concrete: *Shotcrete*

Steel windows and doors: *Hope's Steel Windows*

Wood windows: *Duratherm*

Skylights: *Metcoe*

Bronze doors: *Custom by Washington Iron Works*

Demountable partitions: *Modernfold*

Cabinetwork: *Northwestern Fine Architectural Woodwork*

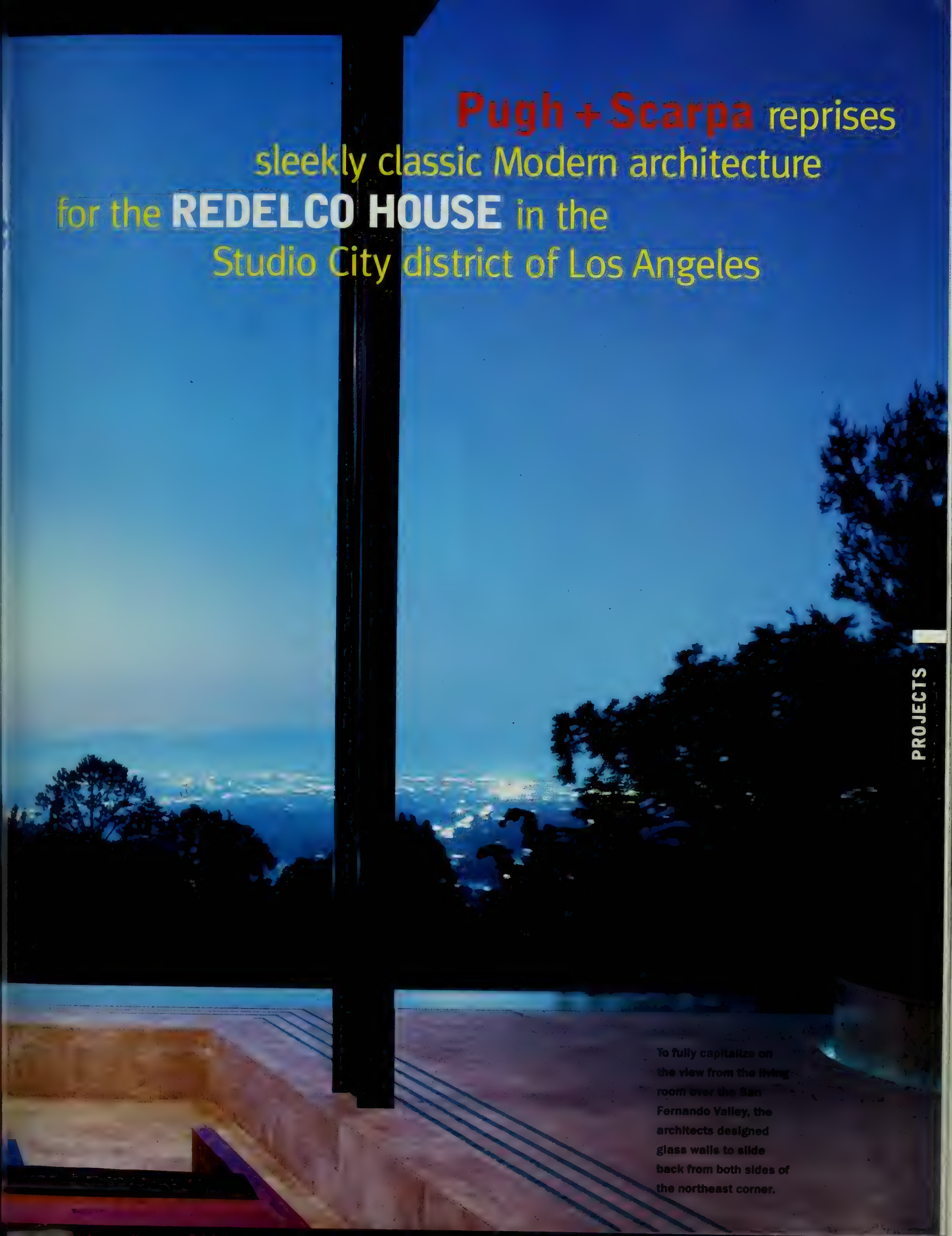
Wall coverings: *Knoll Textiles*

Floor and wall tile: *Dal-Tile; Quarry Tile; Vidrotil*

Wood-block flooring: *Kaswell*

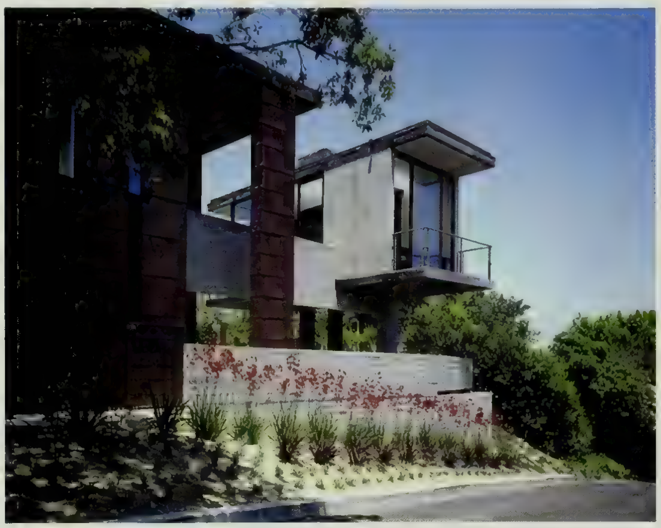
For more information on this project, go to Projects at **www.archrecord.com**.

Pugh + Scarpa reprises sleekly classic Modern architecture for the **REDELCO HOUSE** in the Studio City district of Los Angeles



To fully capitalize on the view from the living room over the San Fernando Valley, the architects designed glass walls to slide back from both sides of the northeast corner.

By Suzanne Stephens



A steel, glass, and concrete pavilion for a home office juts out on the south elevation facing the road (top). A narrow pool, integral to the house's poured-concrete base, edges the north side of the living room (left).

As one recent project by Pugh+Scarpa demonstrates, th Los Angeles version of the classic Modern house is still thriv ing—glamorously so. The city's most memorable house always seem to be perched high on the crest of a verdant hi where their taut, planar glass walls open out expansively to breathtakin views of surrounding mountains, valleys, and often the Pacific Ocea Modernist architecture was made for L.A.'s dramatic topography, lus vegetation, and mild climate, as Frank Lloyd Wright, Rudolf Schindle and Richard Neutra discovered in the 1920s when designing their iconi residences for adventurous arts patrons. Later, in the post–World War years, the Case Study House program, conceived by John Entenz publisher and editor of *Arts and Architecture* magazine, proved that a audience for more modest, economical examples awaited. The spar linear houses by Raphael Soriano, Pierre Koenig, Charles Eames, an Neutra, among others, promulgated indoor-outdoor living by takin advantage of the latest developments in glass and steel technology.

Some 60 years later, the Redel House keeps that legacy alive: It maintains th simplicity and spareness of its Case Stud predecessors, even if its 4,700-square-foot siz exceeds the 1,200-to-2,500-square-foot range the postwar efforts. Indeed, its scale and volu metric spaces bring to mind Schindler's 192 house for Dr. Philip Lovell in Newport Beac Similarly, its linear steel framing recalls th 1929 Neutra house for Lovell in Griffiths Par which historian Thomas S. Hines calls the fir all-steel-framed residence in America.

Designed for a young entrepreneur (who gave his home i corporate-sounding name), the Redelco House occupies a small, 100-b 150-foot site crowning a hill in Studio City, a district in Los Angeles th overlooks the San Fernando Valley. From the street, the house presents deliberately subdued entrance, with copper cladding stretching over mo of the south facade's metal frame to afford privacy to the residents an protect against heat gain. As one enters the domestic precinct, one's e is drawn out toward the valley to the north, a panorama dramatical framed by the liquid line of a narrow pool bounding the limesto terrace. "I liked the strong edge of water against the valley and the San Monica Mountains," says partner in charge Lawrence Scarpa, AIA. wanted a crisp horizon like the one you see at Kahn's Salk Laboratories he explains, referring to the central court of the La Jolla landmark 1966, sited with a dead-on view of the ocean.

The long rectangular main house is composed of two separa volumes: a steel-framed living and dining pavilion and, abutting it, wood-framed structure in which a master bedroom sits atop t kitchen. A glass expansion joint for earthquake protection separates t two. Underneath the main level, the architects were able to tuck a gy and guest bedroom into the poured-concrete base of the house, whe these spaces can open out onto a small green lawn, thanks to the drop

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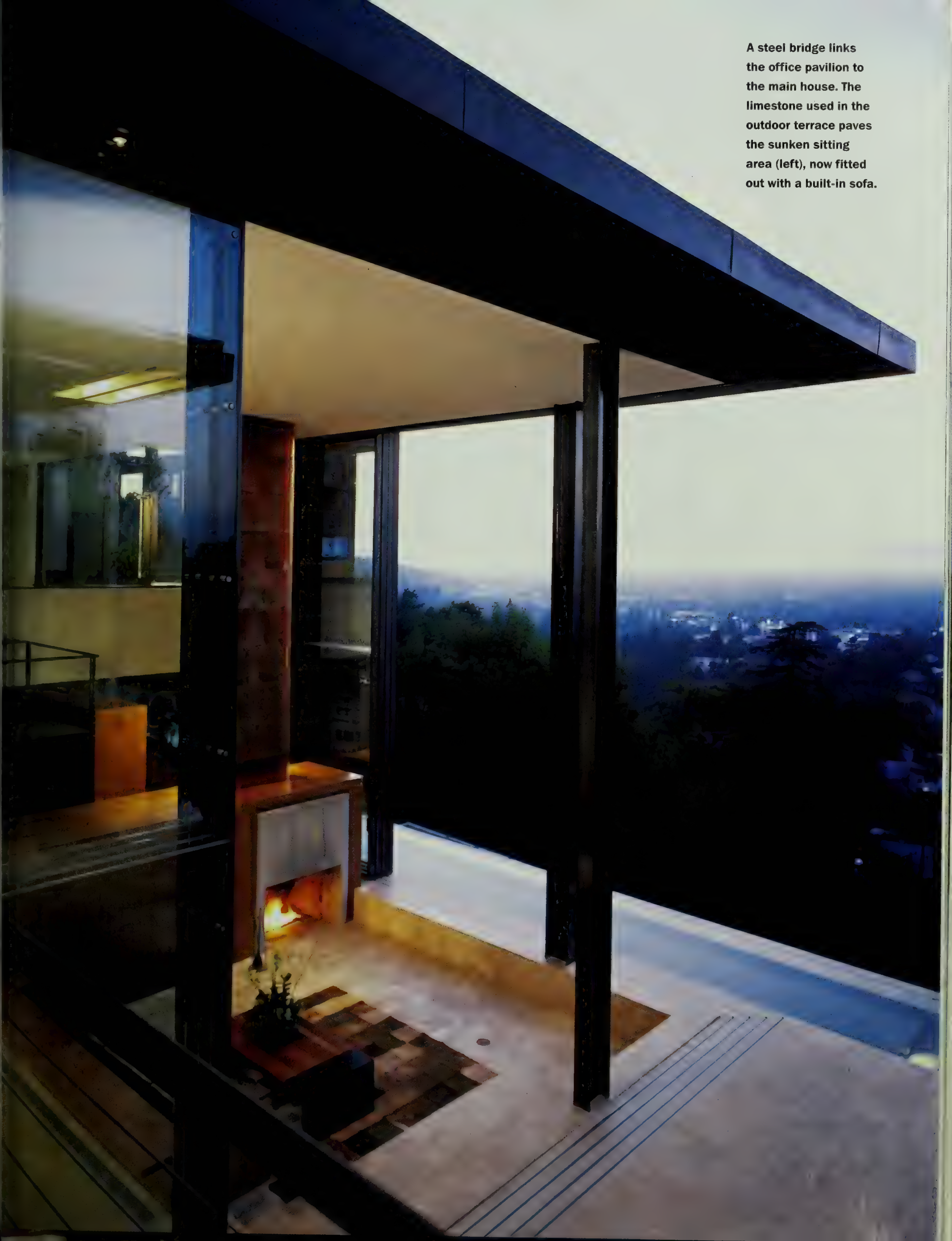
Project: *Redelco House, Studio City, Los Angeles, California*

Architects: *Pugh+Scarpa—Lawrence Scarpa, AIA, principal in charge; Ching Luk, project architect; Angela Brooks, AIA, Jackson Butler, Silke Clemens, Vanessa Hardy, Gwynne Pugh, AIA, Katrin Terstegen, design team.*

Owner: *Withheld*

Engineers: *Gordon Polon, (structural); Helfman Halloossim (m/e/p)*

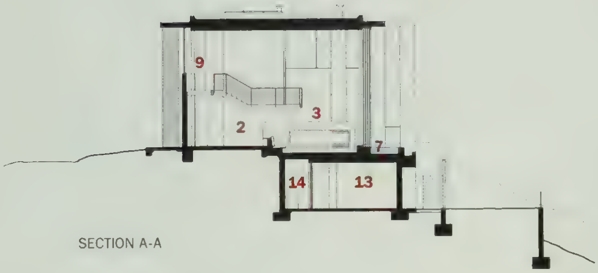
General contractor: *RJC Construction*



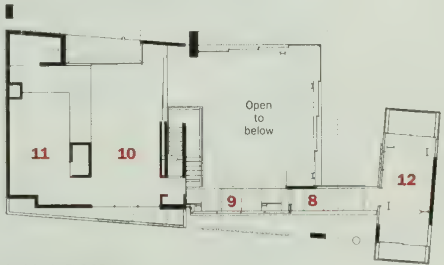
A steel bridge links the office pavilion to the main house. The limestone used in the outdoor terrace paves the sunken sitting area (left), now fitted out with a built-in sofa.

Pugh+Scarpa designed
a freestanding structure
(below) to contain the
ireplace, a tub, and
he media center in the
naster bedroom. The
edroom overlooks the
iving room (opposite),
nd perforated steel
tairs and bridges con-
ect the various spaces.
ehind the copper-clad
himney, a stair leads
own to the gym.

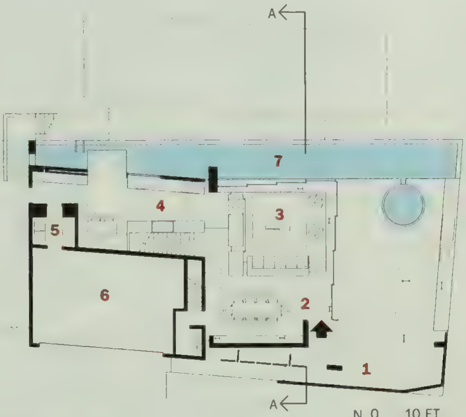
1. *Entry terrace*
2. *Dining area*
3. *Living area*
4. *Kitchen*
5. *Laundry*
6. *Garage*
7. *Pool*
8. *Breezeway*
9. *Bridge*
10. *Master bedroom*
11. *Master bath*
12. *Studio*
13. *Gym*
14. *Storage*



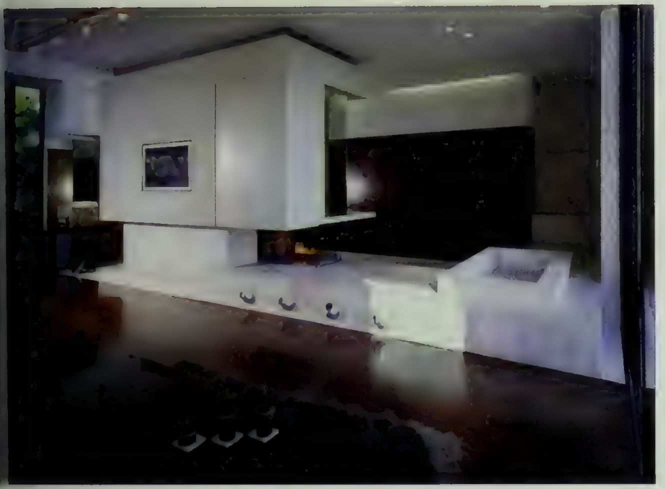
SECTION A-A



SECOND FLOOR



FIRST FLOOR



rade of the rear slope. The concrete substructure also supports the long ough of the swimming pool edging the entrance terrace above.

Along the entrance facade, a bridge of rusted-steel grating ims over the entrance terrace, connecting the main house to a separate eel-frame-and-glass pavilion for the owner's home office. The terrace, eliberately ample enough for parties, features an outdoor grill and hot ub. To enhance the porchlike character of the adjoining living room, e architects designed its 20-foot-high glass walls to slide back from the ortheast corner on both sides—effectively dematerializing it. Access to e outdoors just doesn't stop: You can sit on the ledge of this living oom's sunken seating area and dangle your feet in the pool.

Although the master bedroom overlooks the 22-foot-high liv- g room mezzanine-fashion, sliding panels can seal off this bedroom d adjoining bath when the owner so desires. The interlocking spaces of e house, connected by perforated-steel stairs and bridges, give it a more timate scale than its overall size may suggest. The ample presence of aple built-in furniture and cabinets, and copper cladding the chimney, part natural, warm tones to the spare, immaculate interiors.

The owner had first approached Pugh+Scarpa in 1994, after he ecided to buy the property and tear down the nondescript 1970s house at came with it. Once the house was in construction, however, the ient stopped the project, owing to a business setback. Around 2000, he ecided to resume building. By then, the scheme had to meet changing earthquake codes, and new zoning affected the setbacks from the property line. Scarpa nevertheless welcomed the modifications: "I already had second thoughts about the design," he says. "I had gotten better at doing more with less, and those extra ideas that appealed when I was younger detracted from the project." Fortunately, the client agreed.

The house seems ideal for an owner with an abiding taste for the Minimal and who likes to entertain but doesn't have to worry about messy, accident-prone children. Its grand-luxe aspect may surprise those who know Pugh+Scarpa's work in affordable housing and sustainable design, such as the Umbrella House [RECORD, April 2005, page 176]. "It's just like the movies," says Scarpa. "It's easy to be typecast here." Although the firm is not about to give up its socially conscious efforts, its Redelco House affirms its agility in being able to step into a glamourous role when it wants to. ■

Sources

Metal-and-glass curtain wall: *Giroux Glass; Fleetwood Aluminum; U.S. Aluminum*

Wood floor and roof joist: *Trus Joist MacMillan*

Hardware: *Schlage*

Cabinet hardware: *Hafele*

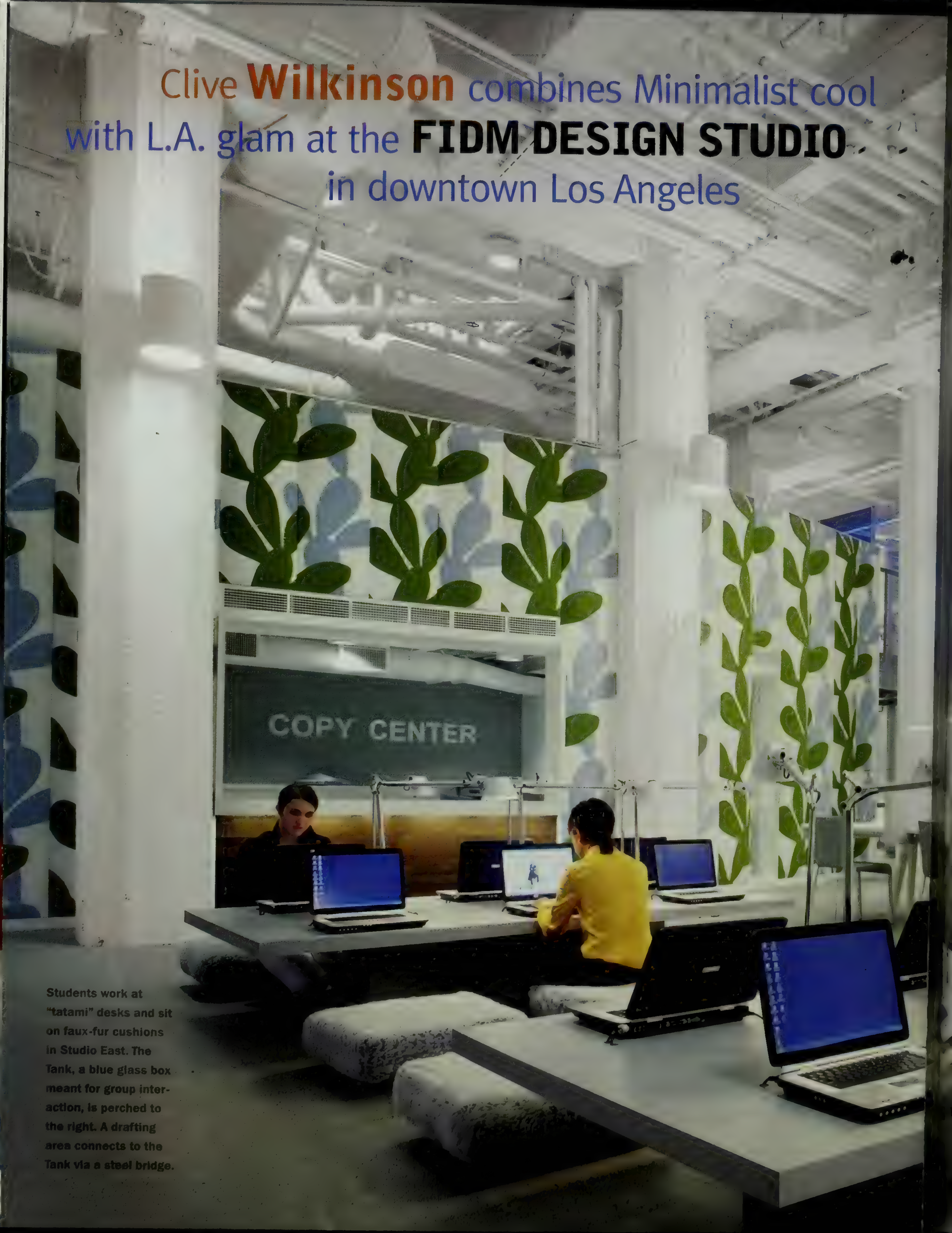
Cabinet and customwork: *Soli Craft*

Paints and stains: *ICI*

Lighting: *Halo Downlight; Capri Trac*

For more information on this project, go to Projects at **www.archrecord.com**.

Clive **Wilkinson** combines Minimalist cool with L.A. glam at the **FIDM DESIGN STUDIO** in downtown Los Angeles



Students work at "tatami" desks and sit on faux-fur cushions in Studio East. The Tank, a blue glass box meant for group interaction, is perched to the right. A drafting area connects to the Tank via a steel bridge.

PHOTOGRAPHY: © BENNY CHAN/FOTOWORKS

By Sam Lubell

It's hard to know what to make of downtown Los Angeles. Although many stretches seem underactive, it's showing signs of life, with condos, restaurants, and shops arriving in striking numbers. The changes are exciting, but many building projects rely on uninspiring, formulaic imitations of Mediterranean, California Bungalow, or New York loft styles in their design, both inside and out. A refreshing exception to this mishmash is the Fashion Institute of Design and Merchandising's (FIDM) Design Studio in Los Angeles, by Clive Wilkinson Architects, a firm based in the city. The 11,400-square-foot interior renovation, which occupies the former 20-foot-high main hall on the first floor of the 1926 Standard Oil building, is part of a two-block downtown campus for about 4,000 students near the Staples Center. It is also located on the edge of what is becoming the city's fashion district, owing to the recent appearance of clothing and textile-related businesses in the vicinity. Appropriately, Wilkinson's Design Studio combines some of the spare and subdued character of New York's own renovated commercial structures in SoHo or Tribeca with a lively palette of colors and pop motifs identified with Southern California.

FIDM is a private college with four campuses in California specializing in fashion, interiors, graphics, and film-set design, as well as marketing and business. The purpose of the new Los Angeles space, say the architects, is to supply studio and study areas to an urban campus that had lacked both, and to invigorate the school's image with an original interior that would inspire students in their creative work. Wilkinson had already begun to address the need to create an identity for FIDM with a building he completed for its Irvine campus in Orange County, California, in 2002. That unconventional project—featuring bright pink walls and bloblike furniture in a converted warehouse—was originally greeted with skepticism by the faculty. But it is now a beloved fixture, which Wilkinson, a South African who opened his office in Los Angeles in 1991, says has helped triple the enrollment at that campus in just two years. Irvine's success helped him land this job, along with several others on the downtown campus. Now the firm is working on classrooms and a lecture hall on the floor above the Design Studio and is designing a multistory residence and classroom hall down the street.

In renovating the former bank, Wilkinson divided the double-height hall into two parts separated by the building's lobby: The L-shaped Design Studio East is reserved for computers and individual study, and the rectangular Design Studio West is designated for drawing and group activities. To make the most of the space, the architects left the banking hall's concrete shell, concrete columns, and mechanical elements exposed. But the look is a far cry from a rough-edged industrial loft. Pop cultural motifs and stylish touches reflect the fashion-conscious student body and convey a breezy Southern California attitude. For instance, a cotton fabric printed with abstracted, brightly colored cactuses and flowers covers the walls to help absorb sound. Workspaces, made flexible via wireless Internet, include low computer desks, called "tatami tables," accompanied by rectangular-shaped faux-fur sitting cushions. Elsewhere, long, open white tables with sliding dividers allow students to work together or individually.

Three focal elements designed for student interaction heighten the quirky aesthetic. In Studio East, the "Tank," a 17-by-17-foot box, is

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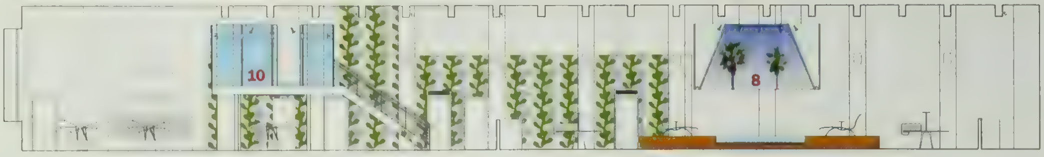
Project: *Fashion Institute of Design and Merchandising Design Studio, Los Angeles, California*

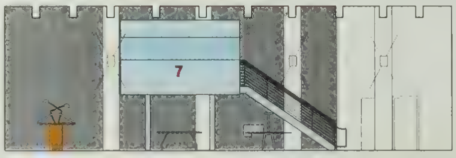
Architects: *Clive Wilkinson Architects—Clive Wilkinson, Alexis Rappaport, Hailey Friedman, design team*

Engineer: *Johnson Leifield Engineers (structural); Simon Wong & Associates (mechanical); MDC Engineers (electrical)*

General contractor: *Steiner Construction*

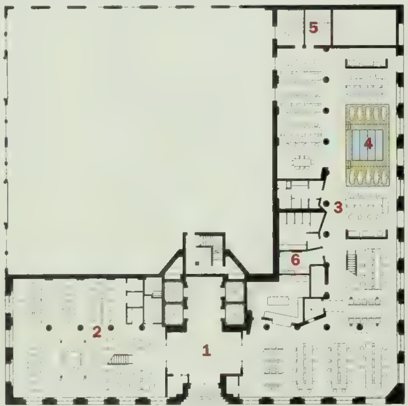


INTERIOR ELEVATION OF EAST STUDIO

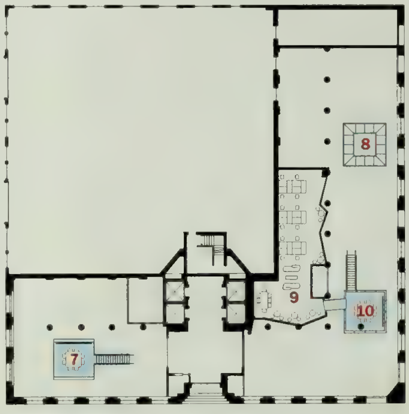


INTERIOR ELEVATION OF WEST STUDIO

In Studio East, the inside of the Pool's lampshade (below left) is covered with images of palm trees. The shade's outer surface (below right two) mimics an old-fashioned computer readout. Pool chairs fitted for computer work surround the Pool (bottom right). The Wave (opposite), raised on steel columns in Studio West, is meant for tableside discussions.

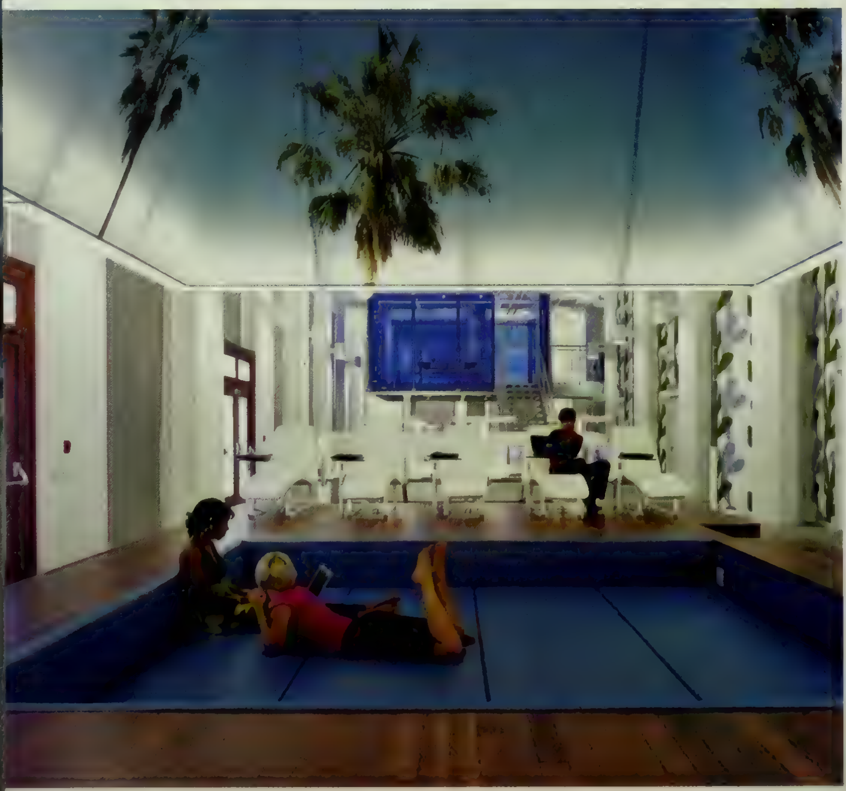


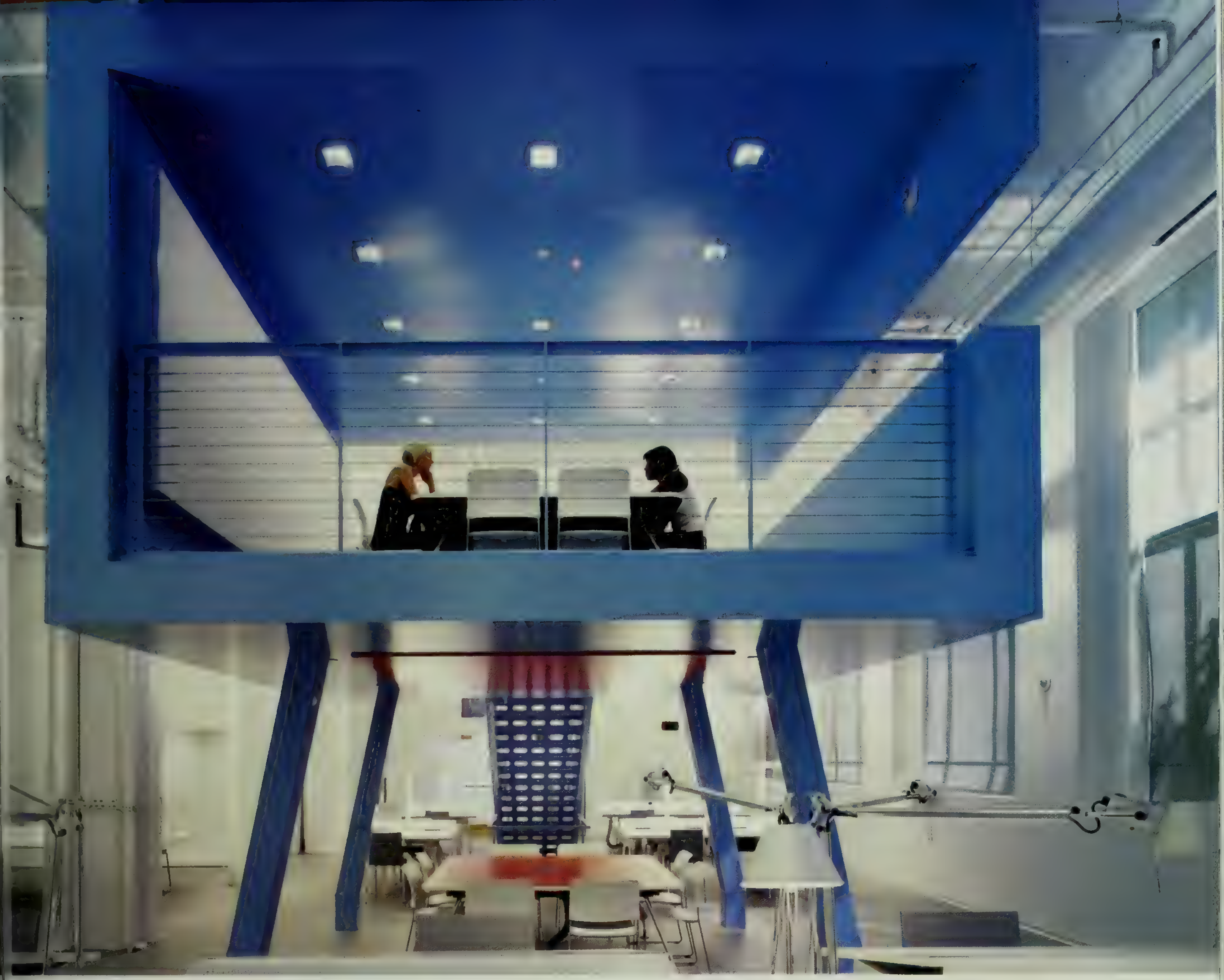
GROUND FLOOR



SECOND FLOOR

1. *Building lobby*
2. *Studio West*
3. *Studio East*
4. *Pool*
5. *Office space*
6. *Support space*
7. *Wave*
8. *Pool lampshade*
9. *Drafting space*
10. *Tank*





closed in blue glass with a blue neon light strip running along the top simulate a water line. Elevated on 8-foot-high steel columns, it is used r group meetings.

Not far from the Tank is the "Pool," a roughly 3-foot-high platrm constructed of palm wood and fitted with upholstered blue floor ats for lounging and casual discussion. Around the perimeter of the ol, deck chairs with adjustable arms create a surreal environment for mputer work. Suspended above this space, a large vinyl-covered polyter light shade, supported on a 17-by-17-foot tubular steel frame, glows om fluorescent lights mounted inside.

Across the lobby, in Studio West, is the "Wave," an elevated box opped up on angled steel columns that gets its name from both its blue lor and its profile, which looks like a geometric abstraction of a curling ve. This allusion may be a stretch, but Wilkinson points out that the mes aren't meant to be taken too seriously: They, along with the strikg forms they designate, are meant to introduce a playfulness that makes e practical space more inviting.

Overall, the firm's design takes inspiration from downtown Los geles's eclectic aesthetic. "It's freer in general here," says partner Alexis ppaport, in comparing Los Angeles to New York, where she worked for veral years. "There are fewer rules and expectations." Fortunately, the firm didn't get carried away with all this freedom—the overall design is energetic and fun, without being overstated or distracting. Simple materials and a clear progression of spaces help make a whimsical project even more powerful and effective.

"I think it's possible to do architecture that looks classic without having to be completely muted and restrained," says Wilkinson. And the apparent success of this building in attracting students so far, like the project in Irvine, seems to indicate that good architecture can be used as a business tool. But can the school in turn do the same thing for downtown Los Angeles? "We hope we can raise the bar," says Wilkinson. "Perhaps it could set a standard that will embarrass some people about what they've put up with in the past." ■

Sources

Custom furniture: *dTank*

Fabric: *Marimekko; Knoll; Mendel's Faux Fur*

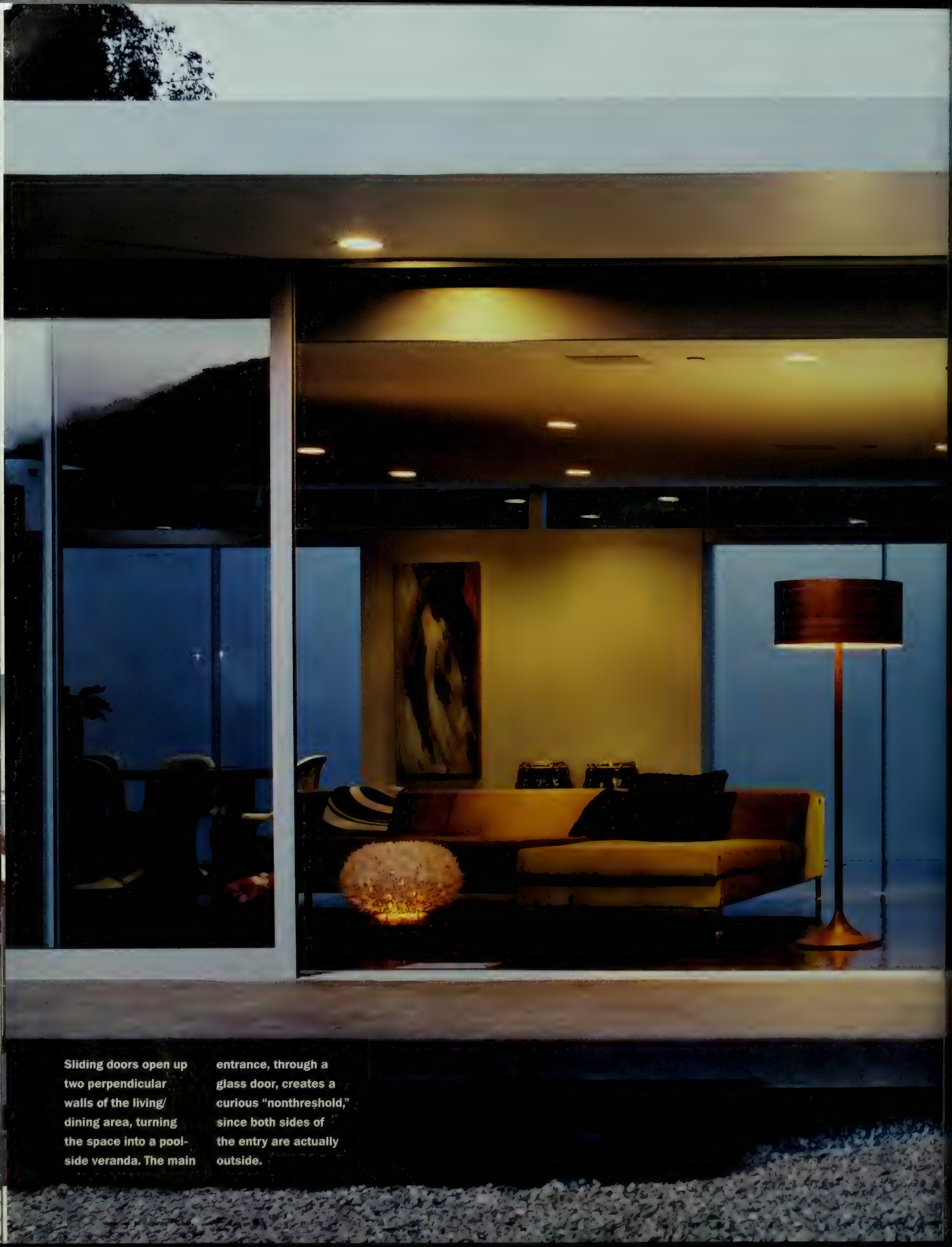
Lighting: *Kirlin; Lumière; Metalux; Halo; Lightolier; Prisma*

Task lighting: *Artemide; Vitra*

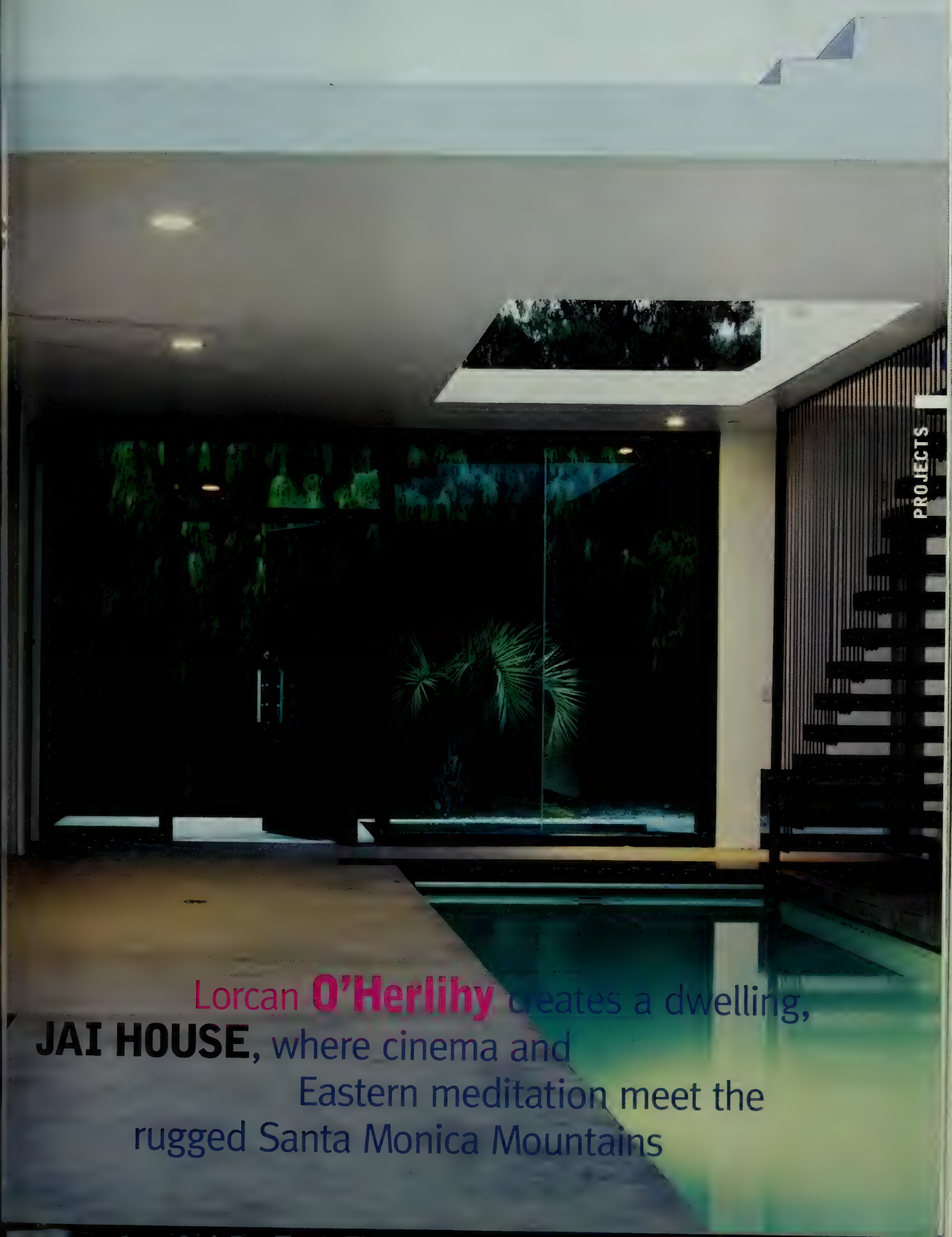
Lampshade: *J. Miller Canvas*

Drafting tables: *dTank; CWA Design; Wilsonart Laminate; Artemide Tolomeo Lights*

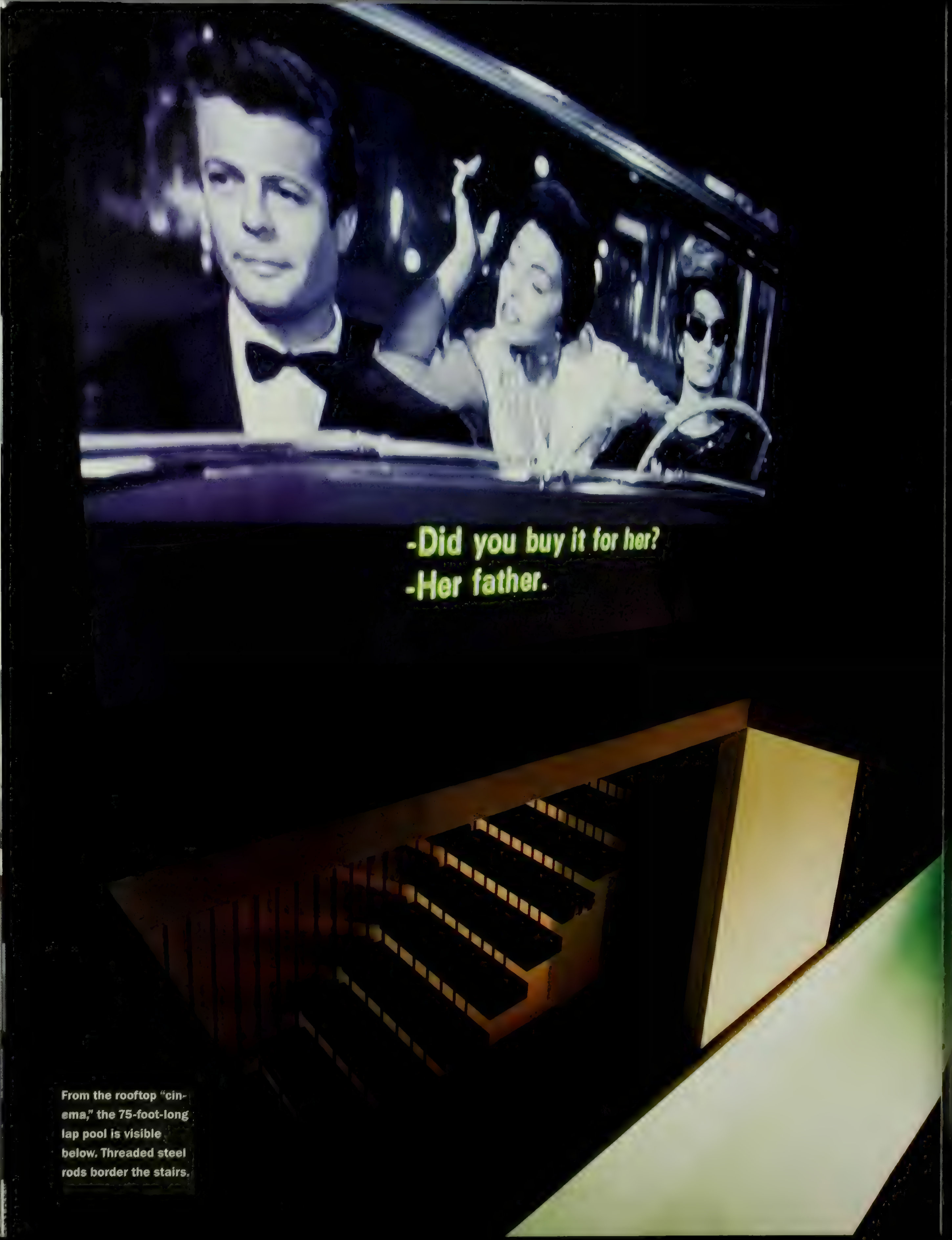
For more information on this project, go to Projects at **www.archrecord.com**.



Sliding doors open up two perpendicular walls of the living/dining area, turning the space into a poolside veranda. The main entrance, through a glass door, creates a curious "nonthreshold," since both sides of the entry are actually outside.



Lorcan **O'Herlihy** creates a dwelling, **JAI HOUSE**, where cinema and Eastern meditation meet the rugged Santa Monica Mountains



From the rooftop "cinema," the 75-foot-long lap pool is visible below. Threaded steel rods border the stairs.

3y Sarah Amelar

When a vodka company was scouting for two quintessentially Los Angeles buildings to feature in a billboard campaign, the ad directors ultimately chose Frank O. Gehry's Disney Hall and Lorcan O'Herlihy's Jai House. hough Jai—with its sleek, planar Modernism and a swimming pool flow- ng from outdoors in—has a certain Hollywood glamour, the unspoiled anyon setting, a few miles inland from the Malibu coast, apparently idn't strike the vodka people as quite L.A. enough. So they Photoshopped ıe building onto a dramatic beachscape—perhaps lifted from Hawaii.

But without resorting to special effects, imported talent, or body oubles, Los Angeles is actually well cast to play itself here—just not in its lichéd wave-splashed role. This project, like the city, has multiple sides to s personality. Set in the rugged Santa Monica Mountains, the house esponds to the clients' interest in Eastern meditation and communing ith nature, as well as their life in the film world and flair for entertaining t home. Since the owners, documentary filmmakers with three children, re as much involved with yoga as with cinema, they asked O'Herlihy to esign a house with a yoga studio—where they could practice meditative xercises and host occasional retreats—and a rooftop, where they could ırow parties and screen movies. They named their place "Jai" for the anskrit word variously translated as "Hail," "Peace," or "Awesome."

During the 12-month construction period, the family lived in two rge tepees, pitched on a secluded stretch of the 1.25-acre site, where the nd dips down. Though Jai House stands on the upper part of the parcel, ordering a road, the 4,100-square-foot building looks out on a pristine ndscape: a state park, just to the south, which will remain undeveloped.

Set behind a gate, the house parallels the road, 70 feet away. From e entrance, the main volume—a 130-foot-long, one-story bar, finished in hite plaster—forms a screen, offering only teasing glimpses of the moun- ins to the south. While large sandblasted windows on the north (or entry) cade reveal a tantalizing shadow play of figures in the living/dining area, section of clear glass at the elevation's center draws your eye in along the ajectory of a 75-foot lap pool that stretches perpendicularly into the land- ape. Just outside the glazed entry, a square koi pond extends the vimming pool's lines, as if that narrow body of water had ducked under- ound briefly and reemerged on the opposite side of the threshold.

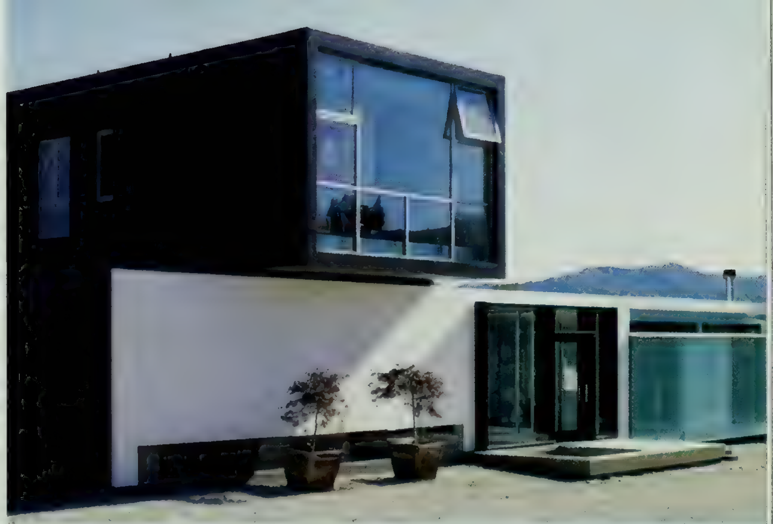
But curiously enough, as O'Herlihy points out, "this is a threshold at doesn't really exist": Once through the glass door, you're still outside, t covered (at least for a few feet). From this small shaded "vestibule" area, e pool, elongated like a fashion runway, continues into the great outdoors. ıe interpenetration of rectangular forms—as well as indoors and out— comes the language of this architecture. On the pool's west side, two ass-paneled walls enclosing the living/dining area slide apart, dissolving a rner and turning the main room into a poolside veranda. Near the oppo- e edge of the water, riserless treads (over an open-air shower) lead up to e second floor, where O'Herlihy has perched an 815-square-foot, partially ntilevered volume, clad in black plaster, to house the master suite.

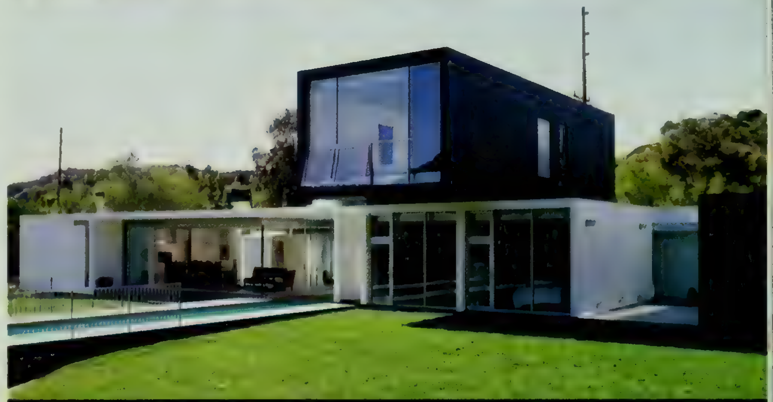
In the tradition of Southern California living, epitomized by the 50s Case Study Houses, exterior and interior spaces flow together. Yet here e architect pushes the concept further by making his clients step outdoors get from the main living area to, say, the two ground-floor bedrooms and

oject: *Jai House, Los Angeles*
chitect: *Lorcan O'Herlihy Architects*
Lorcan O'Herlihy, principal; David
ompson, project manager; Juan Diego
rsovich, Michael Poirier, project team

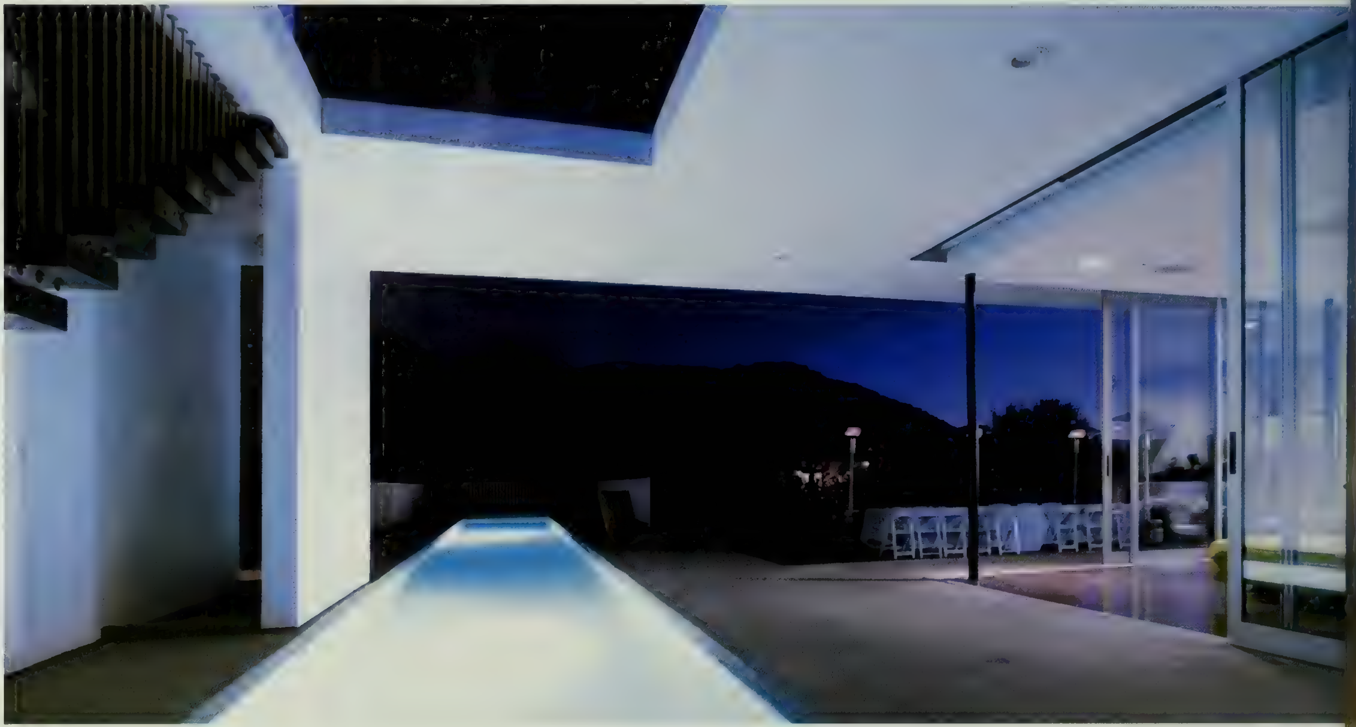
Engineer: *Paul Franceschi*

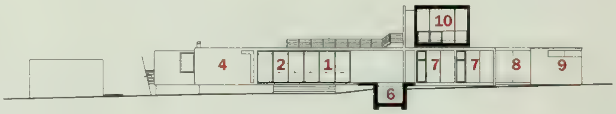
For more information on this project, go to Projects at **www.archrecord.com**.





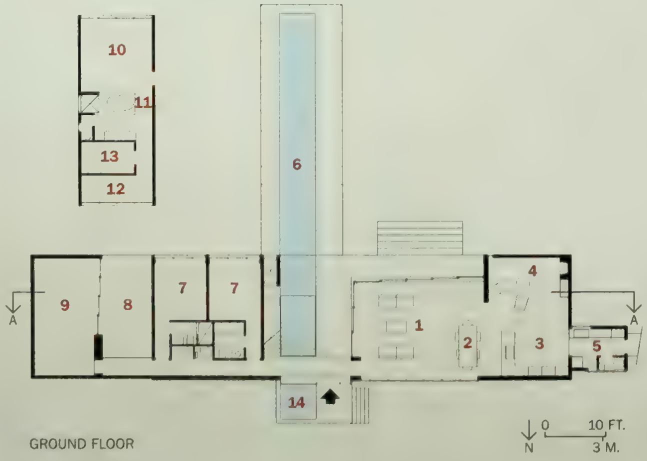
Upstairs, a partially cantilevered box contains the master suite (top and middle). A koi pond at the entrance (top) extends the lines of the lap pool (middle), on the glass door's opposite side. Part way open, the living area's glazed panels set up vertical rhythms (bottom).





SECTION A-A

1. *Living*
2. *Dining*
3. *Kitchen*
4. *Family room*
5. *Laundry/pantry*
6. *Pool*
7. *Bedroom*
8. *Patio*
9. *Yoga studio*
10. *Master bedroom*
11. *Open bath*
12. *Office*
13. *Closet*
14. *Koi pond*



GROUND FLOOR

adjacent yoga studio or the master bedroom, upstairs. (But then again, the are people who enjoyed living in tepees for a year, communing with nature

Inside, more boundaries blur. Living, dining, and den areas mer with the kitchen, where a stainless-steel counter acts as a quiet piece of fu niture. And upstairs, a sybaritic bath, with no partitions around the tu becomes one with the sensual master bedroom, where floor-to-ceiling wi dows—an off-the-shelf storefront—offer expansive views of the landscap

Throughout the house, O'Herlihy gives other ordinary, inexpe sive components an aura of glamour. In the main living areas, glossy floo are of dark-brown, polished concrete. And the fine balustrade that suspen the stair and veils it like a beaded curtain is composed of standard thread steel rods. (The architect deals with the obvious safety issues of running pool through a house with children and showing rooftop movies by inclu ing an automatic cover on the pool and removable guardrails on the roo

"But the house's real inventiveness," he says, "is in the progra rather than material experimentation." He had an affinity for this progra almost ad hoc rooftop screening area, reminiscent of *Cinema Paradiso*- earlier in his career, he had assigned the design of outdoor movie venues his students at SCI-Arc and the Architectural Association. As the son o former architecture student turned actor (the late Dan O'Herlihy, who l the Oscar to Brando's performance in *On the Waterfront*), O'Herlihy has in the spirit of L.A.—often stood at a crossroads of cinema and architectu

By night, projected films animate Jai's simple white planes. Li tempting flashes from a drive-in, the movies glint obliquely toward the ro Though cinema is just part of this mellow, in-touch-with-nature dwelling so private on its south side—the flicker of film glows like previews of comi attractions. No wonder location scouts, reportedly, keep knocking. ■

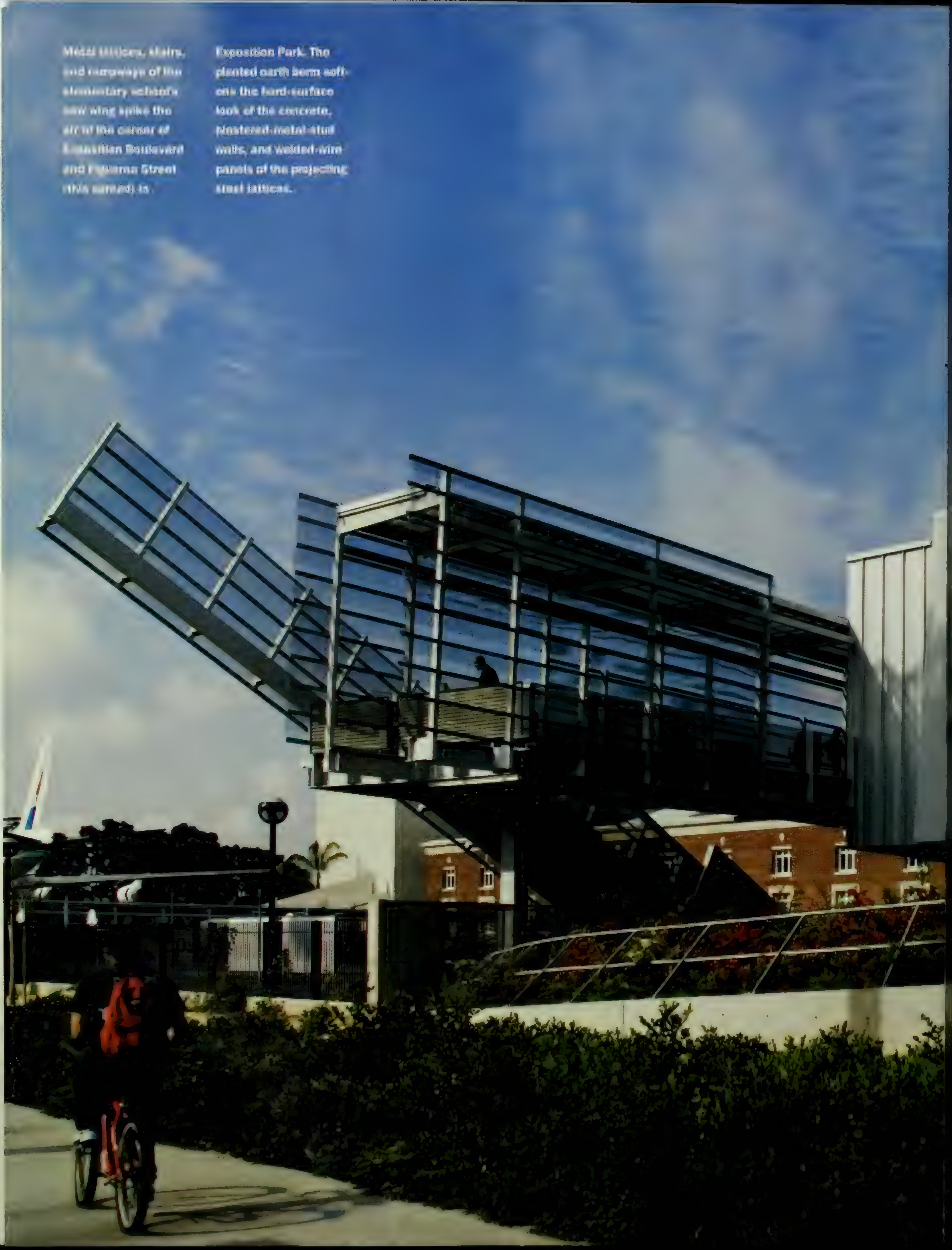
Sources

Aluminum sliding doors: *Fleetwood*
Plumbing: *Boffi; Duravit; Agape*
Appliances: *Sub-Zero; Gaggenau; Miele*

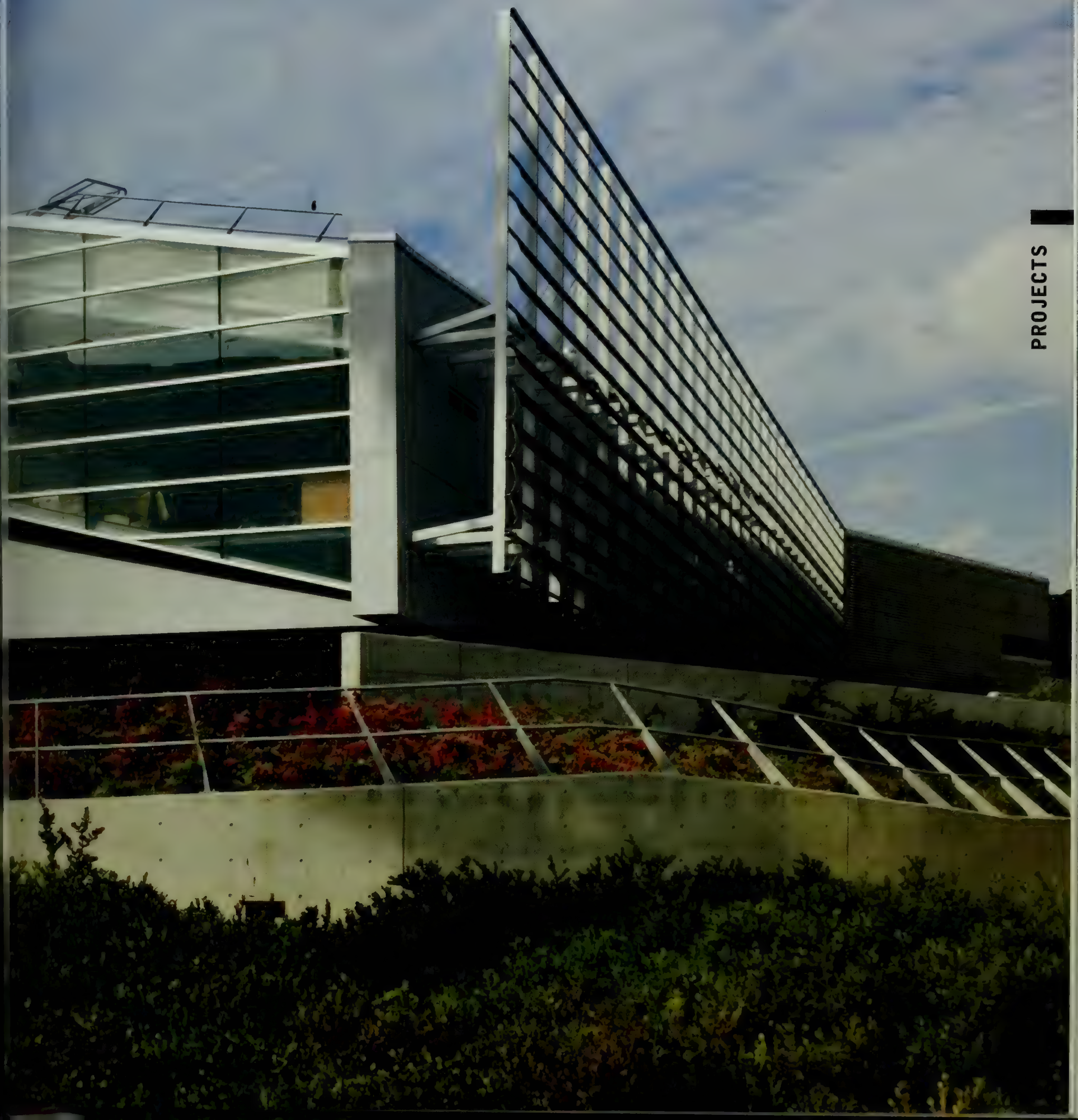
For more information on this proje go to Projects at **www.archrecord.com**.

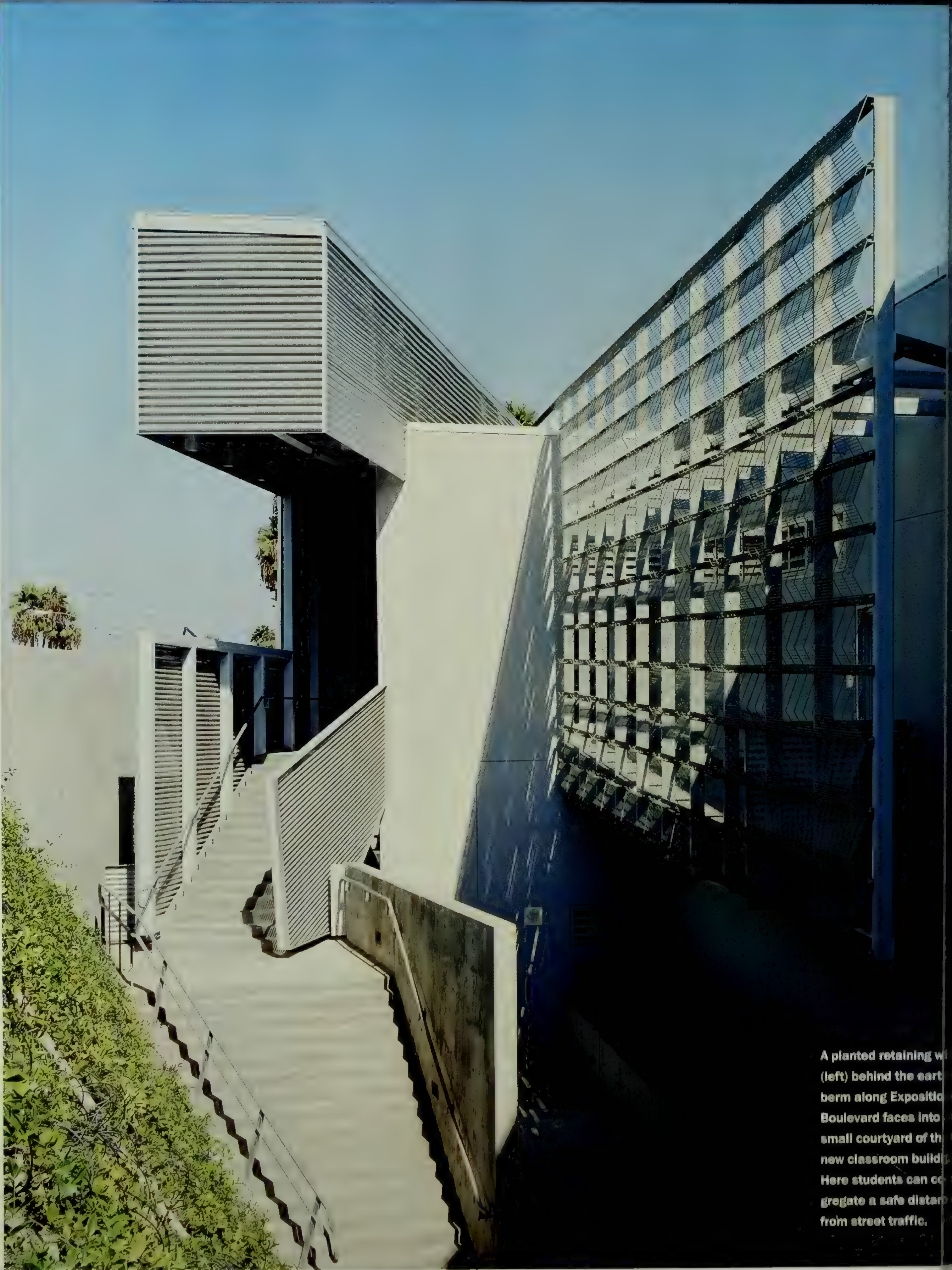
Proportioned like a fashion runway, the pool extends out into the landscape (opposite). The owners screen movies on the roof deck (this page). An automatic cover can close off the pool while movable guardrails (not shown) offer protection on the roof.

Metal lattices, stairs, and rampways of the elementary school's new wing spike the air at the corner of Exposition Boulevard and Figueroa Street (this spread) in Exposition Park. The planted earth berm softens the hard-surface look of the concrete, plastered-metal-stud walls, and welded-wire panels of the projecting steel lattices.



Morphosis forcefully generates a sense of identity for the **SCIENCE CENTER SCHOOL** in L.A.'s Exposition Park





A planted retaining w
(left) behind the eart
berm along Expositio
Boulevard faces into
small courtyard of th
new classroom build
Here students can co
gregate a safe distan
from street traffic.

y Suzanne Stephens

The realization that a thrusting, steel-framed, lattice-laden structure attached to an early-20th-century brick-and-cast-stone armory is actually a public elementary school comes as a shock. It's such a far cry from the drab, low-rise, concrete-block uildings usually pushed through by school districts. The discovery that ne of this country's most aggressively original architects, Thom Mayne, AIA, of Morphosis, designed the Los Angeles school only intensifies the urprise. But maybe it's not so strange. Mayne, whose office is based in anta Monica, often goes after commissions of a public nature—such as he Caltrans District 7 Headquarters Replacement Building in downtown .A. [RECORD, January 2005, page 120], or his just-finished facility for the ational Oceanic and Atmospheric Administration (NOAA) outside Vashington, D.C., not to mention two federal courthouses he is completng, one in San Francisco and the other in Eugene, Oregon.

Unique among a high-flying peer group of award-winning rchitects, Mayne has not made it into the big leagues by designing useums, or for that matter, performing arts centers. Even though his rge-scale commissions don't come with the ample budgets beefed up by rivate donations that cultural institutions attract, Mayne has brought a ui generis architecture consistently to the public sector. If a bold and rash large-scale work, such as the Science Center School, almost overhelms its diminutive (in height) student body, few would hold that gainst him: The school, for 690 K-12 students, along with a teacheraining center, brings a unique energy to a dismal building type.

While the Science Center School is part of the L.A. Unified School istrict (L.A.U.S.D.) system, its unusual program places it in another cateory altogether. With a core concentration of science, math, and technology, e charter elementary school has joined up with the California Science enter's professional educational training and community outreach proam (the Amgen Center for Science Learning) in operating the facility. The airing for the $50 million construction project did not happen overnight. or did its architecture literally spring up out of the ground.

A number of years ago, the L.A. school district and the nonprofit alifornia Science Center, which oversees a cluster of science museums in e state-owned Exposition Park in the South Central section of the city, gan to talk about a joint educational program that would benefit both rties. In 1988, the Science Center had embarked on a three-stage master an to add more cultural facilities to the park. At that point, its most disnguishing structure was Frank Gehry's geometrically exuberant alifornia Aerospace Museum (1984), and its best-known landscape feare was the Beaux-Arts-inspired Rose Garden, dating to 1928.

The Science Center quickly saw the advantage of an elementary hool on the site, where science teachers could be trained while working rectly with students, and a youthful audience could be introduced to the useums. Meanwhile, the L.A.U.S.D. had initiated its own building and novation program with the announced goal of building 150 new schools 2012. In this case, not only would the school district tap into an enrichg program, it wouldn't have to pay for the land in the 7-acre state park.

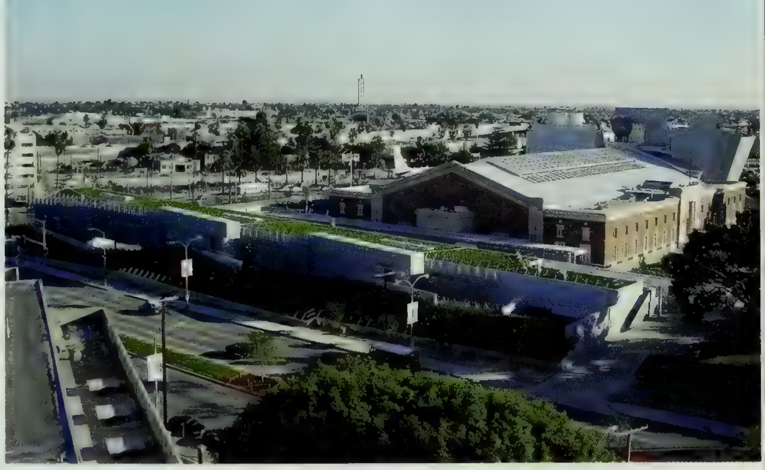
oject: *Science Center School, position Park, Los Angeles*

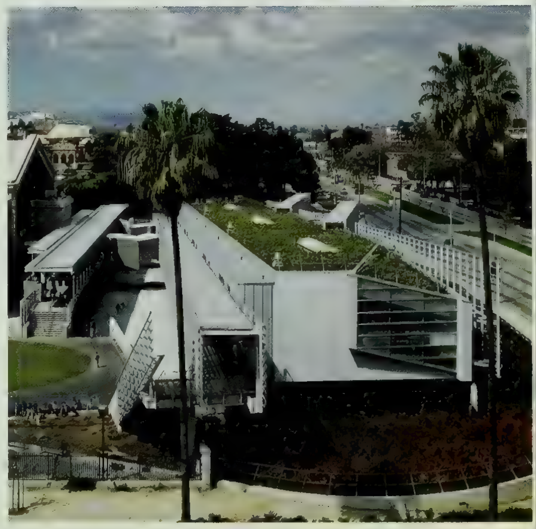
ient: *Los Angeles Unified School strict and California Science nter*

chitect: *Morphosis Architects—om Mayne, principal; Paul nzales, Daynard Tullis, project manager; Mario Cipresso, Kristina Loock, project architect*

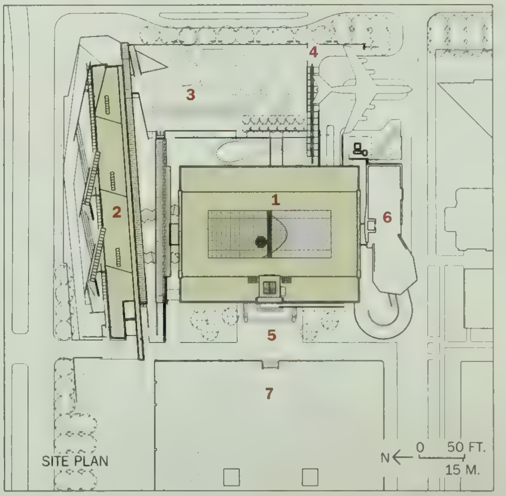
Engineers: *Englekirk and Sabol (structural); Donn C. Gilmore (m/e/p)*

Consultants: *Kaplan Chen Kaplan (historic preservation); Katherine Spitz Associates (landscape)*

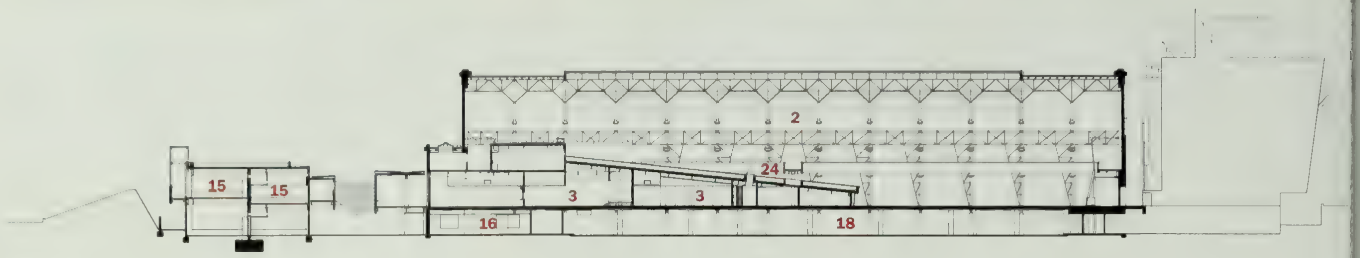




Morphosis renovated a 1912 armory (top) and added a new two-story, steel-framed structure for classrooms on the north (right). Its landscaping includes a grass roof and luxuriant planting of the berm along Exposition Boulevard facing the University of Southern California campus. At the south end of the armory is Frank Gehry's Aerospace Museum (1984), shown in site plan (below).

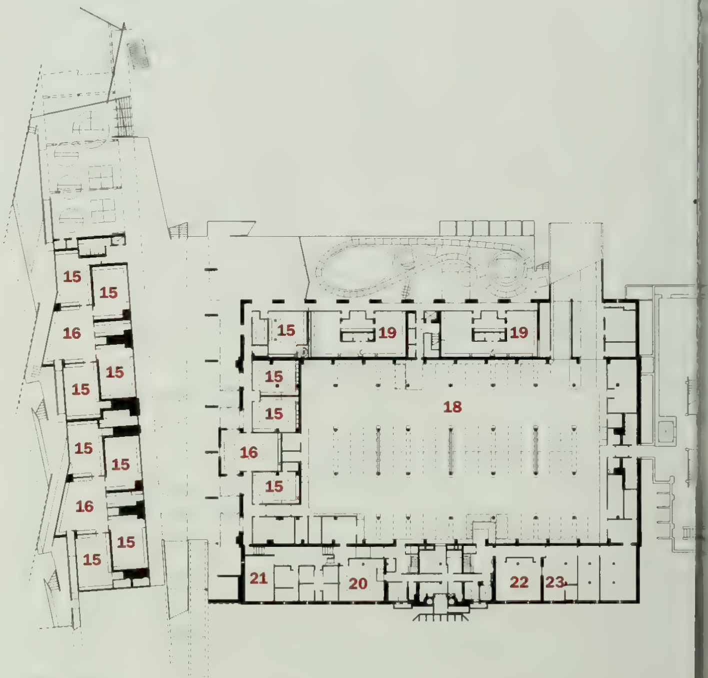


1. *Armory (Wallis Annenberg Building)*
2. *Classroom wing*
3. *Playground*
4. *School entrance*
5. *Entrance to Amgen Center*
6. *Aerospace Museum*
7. *Rose Garden*

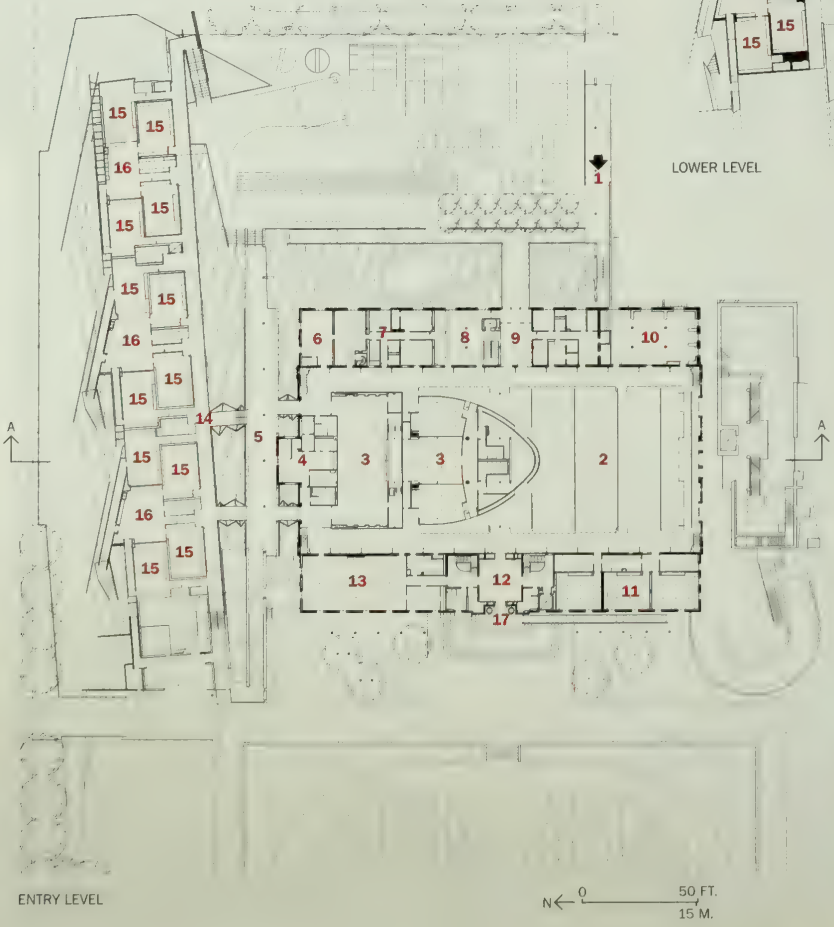


SECTION A-A

1. *School entrance*
2. *Exhibition/event hall*
3. *Multipurpose space*
4. *Kitchen*
5. *Lunch garden*
6. *Faculty dining/lounge*
7. *Faculty offices*
8. *Reception (gallery)*
9. *Lobby*
10. *Student library*
11. *Lab classroom*
12. *Amgen Center lobby*
13. *Conference/event room*
14. *Rampway*
15. *Classroom*
16. *Commons room*
17. *Amgen Center entrance*
18. *Parking*
19. *Kindergarten classroom*
20. *Multimedia labs*
21. *Sound stage*
22. *Student workroom*
23. *Shop*
24. *Bamboo garden*



LOWER LEVEL



ENTRY LEVEL

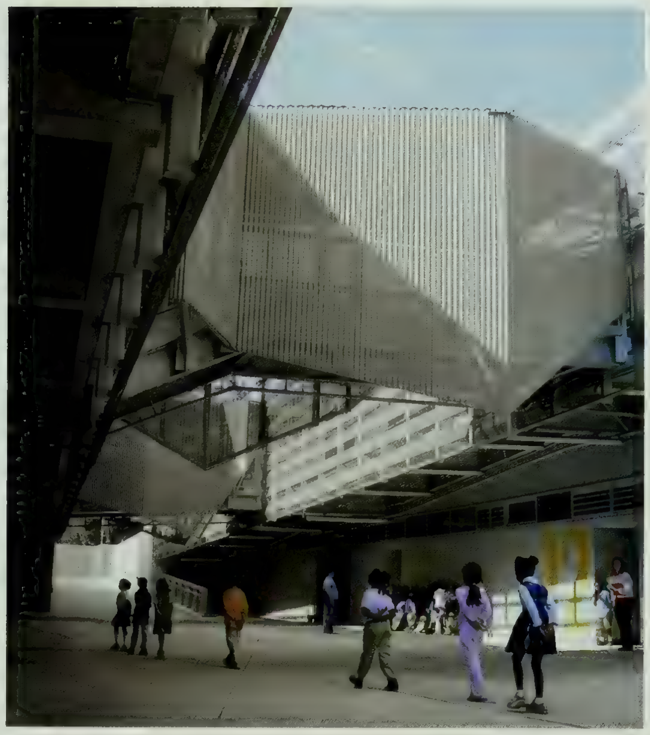
Morphosis inserte
perforated metal s
inside the armory
(below), molding it
give a sense of enc
sure to the lower p
of the the main eve
exhibition hall.

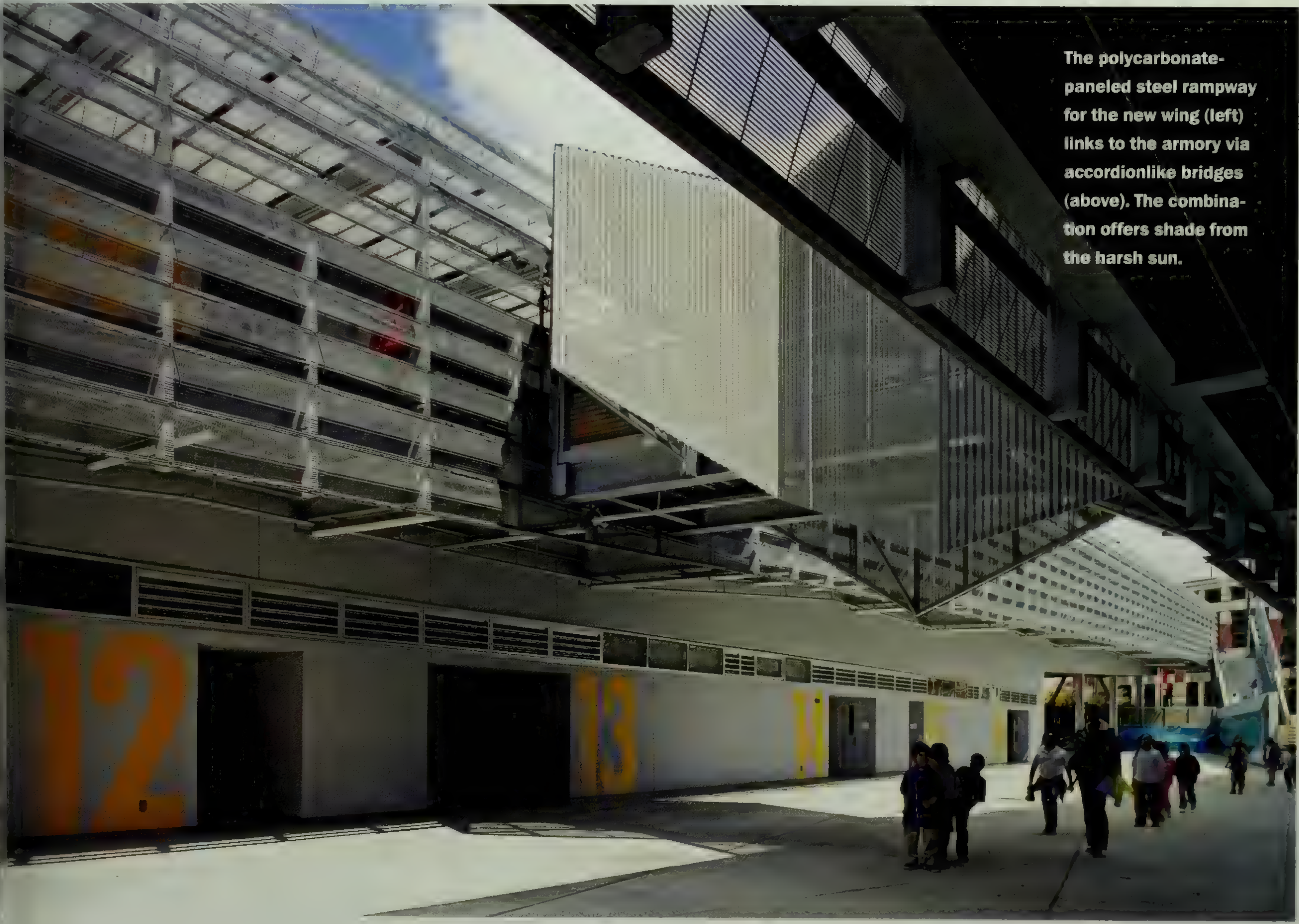
Furthermore, L.A.U.S.D. also decided to actively promote quality rchitecture in its schools by enlisting Steven Erhlich Architects, Rios Clementi Hale Studios, Arquitectonica, Marmol Radziner Associates, and Coop Himmelb(l)au, among others, to design its facilities.

When Thom Mayne and his office, Morphosis, won a competiion for the design of the Science Center School in 1989, he intended to ear down the armory, built for the National Guard in 1912. But the State Office of Historic Preservation pushed to save the structure. By keeping he building intact, the preservation office argued, the center and the chool could get $10 million in FEMA money to upgrade the armory for eismic and safety considerations. "Thom was flexible enough to change is thinking as new information came up," says Jeffrey Rudolph, president nd C.E.O. of the Science Center. "We had to pull together funding, work ut the joint program, and tie this into a historic preservation plan. hroughout all this, Thom stayed focused on the long-term goal."

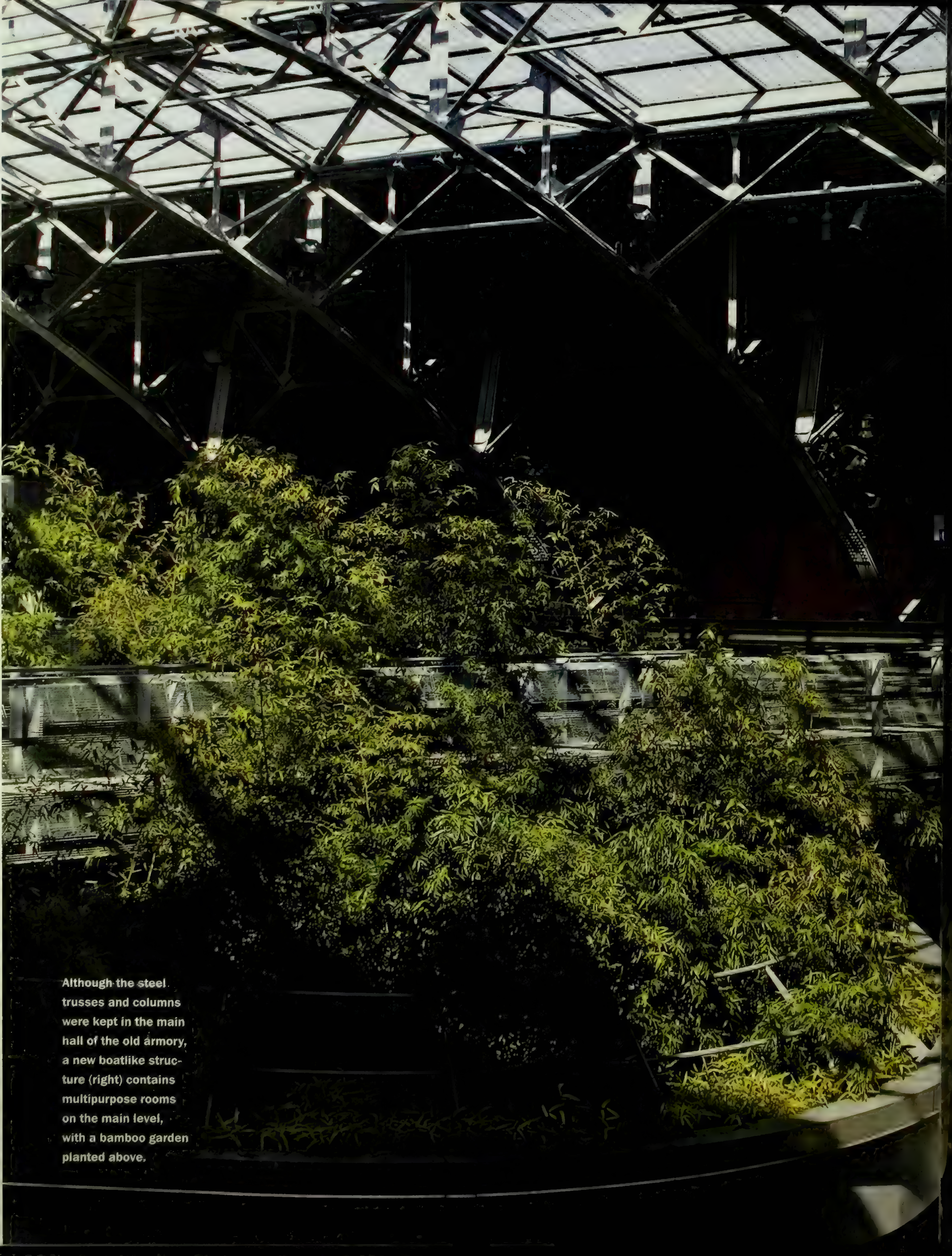
"WE HAD TO PULL TOGETHER FUNDING, WORK OUT THE JOINT PROGRAM, AND CONSIDER PRESERVATION," SAYS SCIENCE CENTER'S JEFFREY RUDOLPH.

Had Mayne's original scheme been adopted, his building would ave been cheek-by-jowl with Gehry's Aerospace Museum on the south. Now the two very distinctive works of architecture act as bookends for the

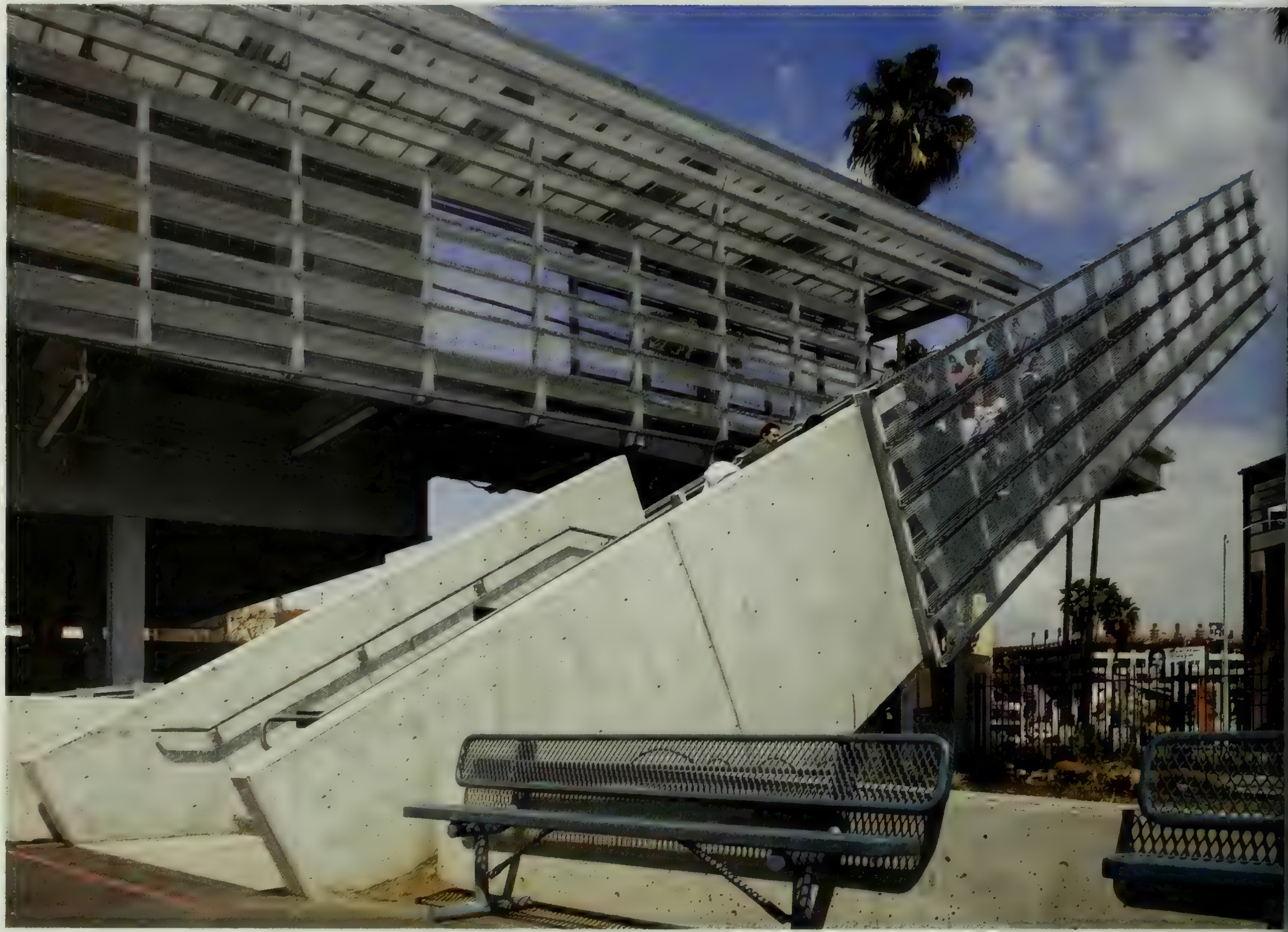




The polycarbonate-paneled steel rampway for the new wing (left) links to the armory via accordionlike bridges (above). The combination offers shade from the harsh sun.



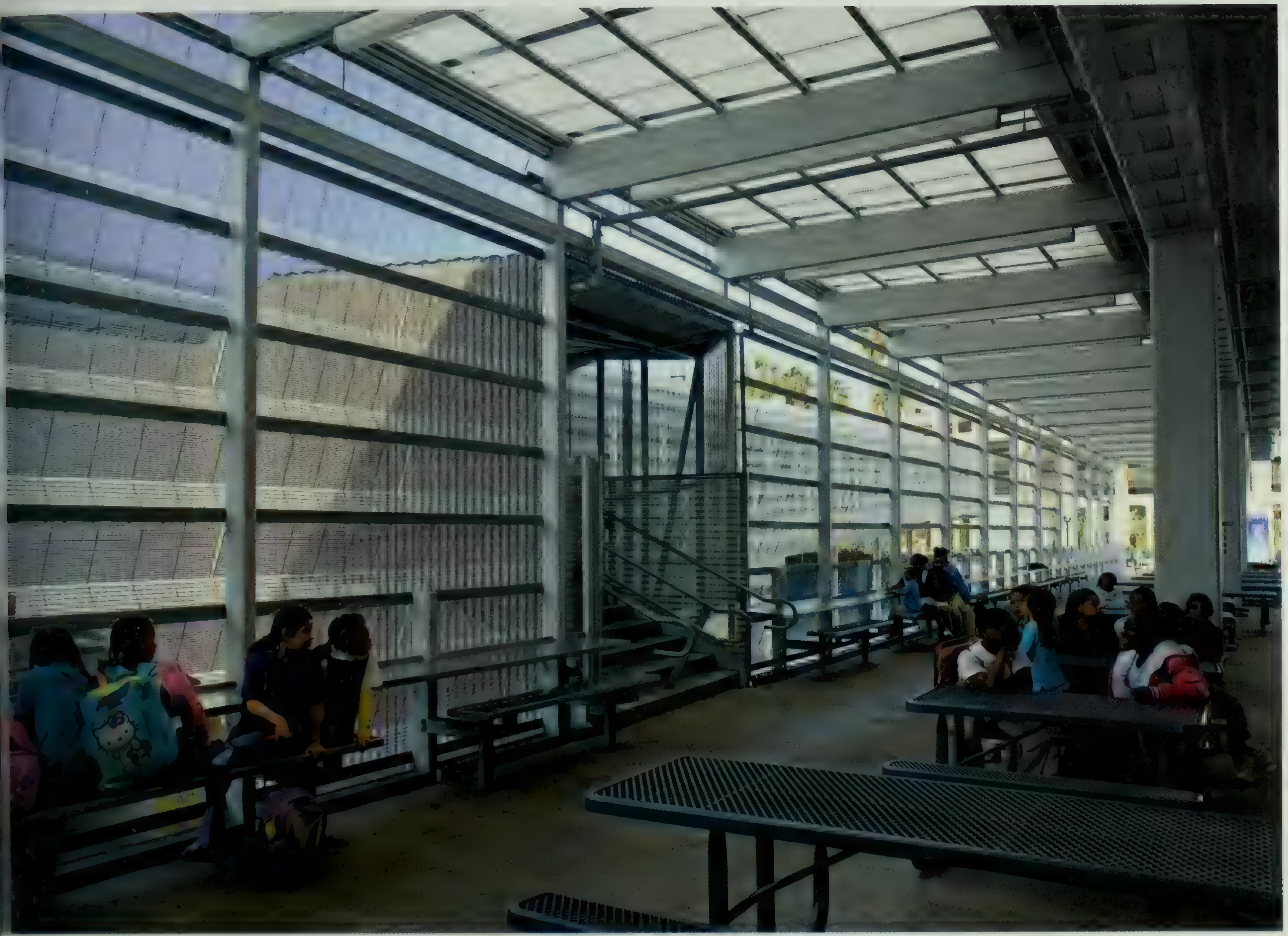
Although the steel trusses and columns were kept in the main hall of the old armory, a new boatlike structure (right) contains multipurpose rooms on the main level, with a bamboo garden planted above.



Stairs jut up from the playground to the classrooms' rampway (top). The classrooms in the new wing cluster around common rooms (above). The lunch garden (opposite), protected by polycarbonate panels, runs along the north edge of the armory.

almost 100-year-old building. The renovation of the 120,000-square-fo armory (now named the Wallis Annenberg Building for Science Learnir and Innovation), for which Kaplan Chen Kaplan Architects acted preservation consultants, proved daunting. The team of architects neede virtually to strip the armory to its shell for an event and exhibition hall, pl install eight elementary school classrooms along with a commons roor labs, a library, and various teacher-training facilities. The architects replac the armory's rotting wood roof with a metal one, and reinstated the ori inal opening along the central spine—enlarging it somewhat. (Drai siphon off rain water.) While the steel trusses and columns could stay place with added braces and gusset plates, the existing walls had to strengthened with rebar and shotcrete. Working with engineers Englekirk Sabol, the architects inserted steel horizontal trusses, spanning 100 feet, the north and south walls, and built shear walls to transfer loads along t east and west wings. After removing the main hall's first floor, the team bu a boatlike structure on the new floor slab above the parking level. It co tains multipurpose spaces within its prowlike form, while supporting lush, 8,400-square-foot bamboo garden on its top deck.

Just to the north of the historic building, Morphosis designe new two-story, bar-shaped structure linked via bridges to the armory. T steel-framed, 34,000-square-foot wing contains 20 classrooms, four ir group, clustered around five common rooms reserved for scientific exp iments. A long rampway paralleling the wing takes students down to t playground or to the armory, where another above-grade longitudir



r, the lunch garden, is attached to its north edge.

The architecture of the new wing draws on Morphosis's signa-
re lexicon of steel lattices, bar buildings, bridges, and berms. Here
ayne pushed the linear structure upward toward the east so that his
dded lattices, bridges, and stair extensions jaggedly protrude above the
ersection of Exposition Boulevard and Figueroa Street. The strategy
ivates the corner and serves as a (somewhat subtle) signal that the
trance to Exposition Park is nearby. Those in search of the school's
trance on Figueroa (not easy to find the first time) should keep in mind
t you take a turn at the mammoth DC-8 plane, poised between the car
d bus drop-off points.

HE NEW WING'S ARCHITECTURE DRAWS
N MAYNE'S LEXICON OF LATTICES,
AR BUILDINGS, AND BERMS.

On the opposite side of the armory, the entrance to the Amgen
nter looks out to the Beaux-Arts-designed Rose Garden to the west.
ing account of its very different sensibility, Mayne designed the new
ng to appear embedded in the earth by placing its lower levels behind
earth berm that rises gradually to midlevel along Exposition
ulevard. Planted by landscape architect Katherine Spitz with leafy
issa grandiflora and pyracantha, the berm helps shade lower-level
ssrooms from the sun, and behind its retaining wall provides a carved-out courtyard for the young students, removed from traffic.

Similarly, the planting of the new wing's roof with grass over soil and weatherproofing reduces heat load for the school's mechanical systems. Although the abundant planting on the berms and the roof adds a lot of greenery to the school, most of it can be appreciated best from a bird's-eye view; the small children walking around would have more of an under-the-bridge perspective. Considering the amount of sunshine in this city, the shade offered by the rampways and bridges overhead must be welcome. Nevertheless, Mayne's muscular, industrial-strength, steel-and-concrete apparatuses could be a wee bit overwhelming. Similarly, Mayne has given the classroom interiors a tough-chic look with fluorescent lighting and black-painted ceilings. Although the interiors offer a bracing tonic to the saccharine colors and cartoon art that often dominate elementary schools, sometimes the look is a bit grim. But let's not obsess too much. A school as inspiring and imaginative as this just doesn't happen every day. ■

Sources

Insulated polycarbonate skylights and roof panels: *CPI International*

Wire panels: *California Wire Products Corporation*

Corrugated and perforated metal siding: *Metecno-Morin/West*

Metal deck roof: *EPIC Metals (armory)*

Wire grid ceiling panels: *USG*

Planted retaining wall: *Soil Retention Products (Verdura)*

For more information on this project, go to Projects at **www.archrecord.com**.

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Stainless Steel or Bronze
Satin Finish
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Custom sizes available
Pipe Size: 8" Schedule 80 pipe
(to be filled with concrete)

Right:
Metropolitan Bollard: Square
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Branching Out

LOS ANGELES AND OTHER CITIES ARE ENCOURAGING GREATER DIVERSITY IN THE DESIGN OF BRANCH LIBRARIES AND RESTORING A SENSE OF CIVIC PRIDE IN THESE BUILDINGS.

By James Murdock

1.

Los Angeles, California

Hodgetts + Fung brings a lively slant on design to the Hyde Park branch library, layering light and space to create a popular new landmark.

2.

Tucson, Arizona

At this suburban branch, Richärd + Bauer used rugged materials to blend in with the desert and bold forms to stand out from nearby sprawl.

3.

Seattle, Washington

Combining an environmental agenda with a neighborhood focus, Bohlin Cywinski Jackson's Ballard Library makes a strong civic statement.

Due to their size and prime downtown locations, central public libraries hold a certain star power over branches. In recent years, tour-de-force buildings by Rem Koolhaas/OMA in Seattle, Will Bruder in Phoenix, and Moshe Safdie in Salt Lake City grabbed most of the attention within municipal library systems. Branch libraries, though, remain the heart of many communities, and they are finally getting their architectural due.

Thinking about neighborhood libraries often conjures visions of the archetypal Carnegie: a building whose large windows allowed glimpses of people reading, an advertisement for Andrew Carnegie's vision of the library as a temple for self-directed learning. Between 1881 and 1917, Carnegie funded the construction of more than 2,500 libraries worldwide. Even the smallest of these buildings were often the grandest structures in their communities.

But the latter half of the 20th century was unkind to this building type. Shrinking city budgets and bureaucratic aversion to risk-taking resulted in uninspired, bunkerlike architecture. These unwelcoming buildings were particularly unfortunate since libraries found themselves competing for patrons with Borders and Barnes & Noble, which let people browse for hours while sipping coffee, and with the Internet, which provides access to information that was once available only at the library.

To attract people in this digital age, branch libraries are offering free wireless Web access, computer classes, after-school programs, and other educational services. The books are still there, but they've taken a backseat—or headed to the central library, which increasingly functions as a distribution center that dispatches books to branches when needed. To this end, the balance of power is shifting. Central libraries continue to attract people for special events, such as author readings, but the branch system draws larger crowds on a daily basis: children for story hour, teens who need homework help, and adults who want to enjoy the company of others.

Branches are also evolving from a design standpoint. Glazing has returned in a big way, complemented by open floor plans. This new transparency contains potent symbolism. "When you walked into a branch 15 years ago, what was available to you was only what was in that branch," observes Susan Kent, Los Angeles's former city librarian. "Now with computers, the world is available to you. That's a huge jump. You effectively have libraries without walls, contained within the walls of libraries, and that opens amazing possibilities for literally and figuratively knocking down the

more information on these projects, go to Building Types Study at
w.archrecord.com.

James Murdock writes about architecture from his base in New York City.

The bold facade of Carde Ten Architect's Canoga Park branch, in L.A., provides a welcome counterpoint to nearby burger joints, strip malls, and parking lots.

At the request of residents in L.A.'s Pico Union neighborhood, M2A designed Carnegie-style branch, right down to the proportions of its main reading roo

steel and bricks to access the world of information."

Although branches now feel loftier, they average between 10,000 and 15,000 square feet, slightly bigger than in the past but much smaller than central libraries such as Seattle's, which encompasses 363,000 square feet. An intimate scale helps residents claim these buildings as their own. People view branches as truly public space, something that's sorely lacking in an increasingly fractured and commercialized society. Meeting rooms are obligatory so that PTAs and other community groups can gather.

Fontayne Holmes, the Los Angeles Public Library's city librarian, saw evidence of her city's renewed appreciation of its neighborhood libraries on a recent visit to the Los Feliz branch. "All of the PCs were occupied, and there must have been a dozen more people using their own laptops," she says. "Many people can use computers at home or at the office, but they still come to the library to do it. They come for the atmosphere, our programs, and for the people."

This promising moment for branch libraries holds potential for small-scale civic architecture, as seen in the projects in Los Angeles, Seattle, and Tucson in this month's Building Types Study. These projects set an elegant new standard for what branch libraries can look like, even when constructed on a tight budget.

Funding remains a large part of the equation, but the Los Angeles Public Library's experience proves that it takes more than money to produce good architecture. In 1998, voters approved a $178 million bond measure to renovate, completely rebuild, or construct 32 branch libraries; four more projects were later added to the list, so the group now makes up half of the entire system. Rather than follow the traditional model of picking architects from the city's preapproved stable, the library invited younger, innovative firms to participate. It gave the architects only basic program requirements and wide latitude to be creative. The results have earned praise throughout the city and beyond.

"When you look at the range of different libraries that have come out of this program, it's like a little collection of jewels," observes Patricia Rhee, AIA, an associate at Steven Ehrlich Architects, which designed three libraries. "There's no way you'd think that one architect had cookie-cut all of the buildings."

For her part, Holmes is thrilled with the diversity of designs, but notes that giving architects unprecedented freedom did produce some unexpected consequences. Thirty-plus unique branches means an equal number of unique maintenance concerns—sometimes as prosaic as remembering to order special light bulbs.

"It took guts on their part, but how refreshing it is to have yo own unique library in your community, one that theoretically meets yo needs," observes Scott Carde, FAIA, a principal of Carde Ten Architec which designed three branches. "Los Angeles has Disney Hall and t Caltrans building, which made big architectural statements recently. B on a quieter scale, these libraries sprinkled throughout town have equally significant effect on Angelinos."

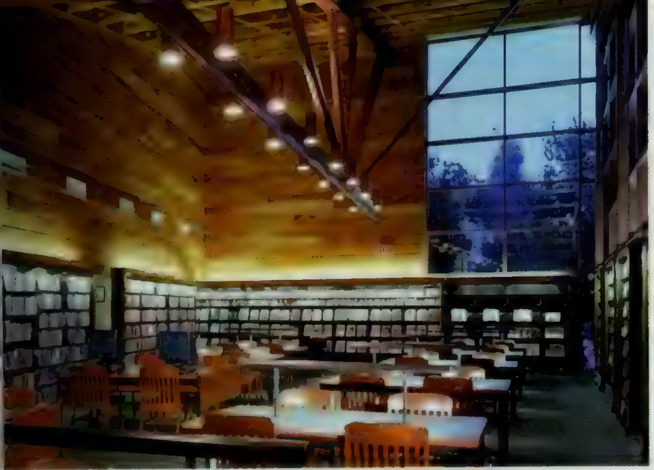
Each neighborhood had tremendous input in designing i branch. In Pico Union, for instance, community members successfu convinced the library to choose a different architect after the first fi failed, in their estimation, to design something that suited the are historic character. The library turned to a specialist in historicist work, t firm M2A, which designed a building with a Carnegie-era character th looks as though it dates to the turn of the last century.

This being Los Angeles, residents also expressed concern abo where to park their cars. Fortunately, most communities wanted on-gra parking placed behind their library, allowing the building to presen strong street presence and encourage a more pedestrian-friendly chara ter in the city's automobile-centric streetscapes.

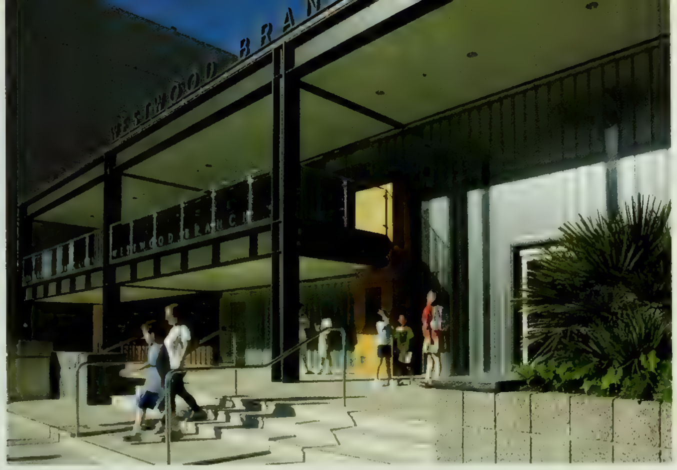
But there were a few exceptions. In Woodland Hills, commun members wanted to save some Eucalyptus trees that were incorporated in a parking lot at the front of the site. To help the library building stand o architect Barton Phelps & Associates gave it a bold, angular roofline th peaks at the street elevation and then slopes down as it approaches t property's rear boundary to match the lower profile of nearby houses.

The Westwood Branch, meanwhile, faces onto an entire stree parking lots, but was unable to secure a site large enough to allow for o grade parking. So the library built a garage below ground. Althou patrons can take an elevator directly to the main reading room on t building's second story, Steven Ehrlich Architects' plan instead encoura them to walk up through a sheltered entry plaza. Clear glazing along t rear elevation provides views of Westwood Village Memorial Park, a cemetery that directly abuts the library and counts Marilyn Monroe a architect Frank Israel among its eternal residents.

With its open rectangular room on the main floor, t Westwood building represents the library's desire that floor plans be uncluttered as possible. But Los Angeles is far from being alone on t score. Open plans, with few internal walls or columns, help a libr accommodate future alterations—and, on a deeper level, symbolize t unfettered flow of information and knowledge.



e lofty main reading room of Barton Phelps Associates' Woodland Hills ranch, in L.A., recedes to a more intimate scale for the children's alcove.



Channel glass in the facade of Steven Ehrlich Architects' Westwood Branch, in L.A., controls light levels and blocks views of parking lots across the street.

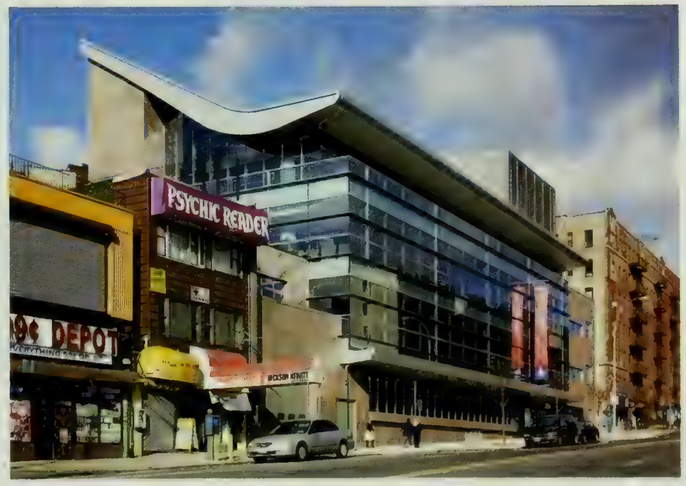
Susan Kent, who left Los Angeles in 2004 and now directs the ew York Public Library's 85 branches, notes that transparency is a hall- ark of the recently completed Bronx Library Center, designed by attner Architects. But like many older urban systems, New York has wer opportunities to build from scratch and instead focuses on renovat- g its existing Carnegie-vintage buildings. Kent is not yet ready to gut em, but she recently became intrigued by this idea after seeing the wide- en interiors of an Apple Store that Bohlin Cywinski Jackson and onnette Riley carved out of an old post office in Manhattan's SoHo.

Airy interiors are a hallmark of branch libraries in Seattle, which, e Los Angeles, embarked on a bond-financed program in 1998 to renovate build 28 branches, including the new central library. In Carlson rchitects' Beacon Hill Branch, for instance, wooden beams soar upward to fine a large central volume energized with daylight from clerestory win- ows. Deborah Jacobs, Seattle's city librarian, values the symbolism of open or plans and single-level construction. But she points out a pragmatic rea- n for this formula. "For security reasons, it's good to be able see an entire om from one vantage point," she explains. "Also, you don't have to staff a cond floor. As a steward of tax dollars, that's something I have to respect."

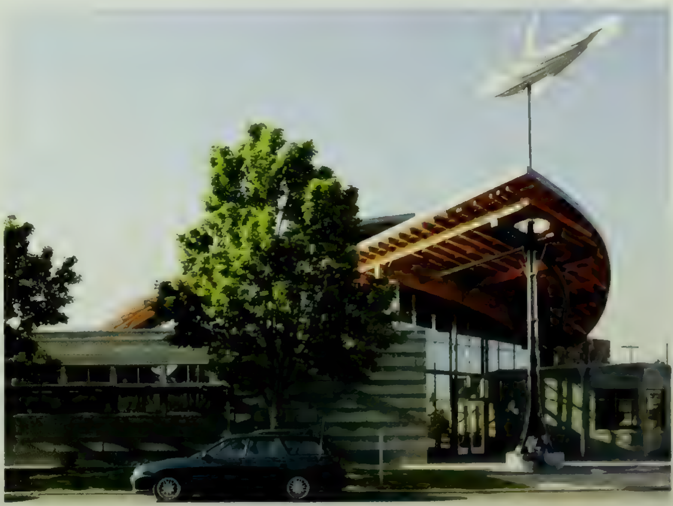
Jacobs's frankness highlights a perpetual challenge in the library orld. While construction dollars have been relatively easy to come by, anks to ballot initiatives, operating money remains scarce as libraries are rced to compete against other city departments. Both Los Angeles and attle made sure enough money was set aside to operate their new anches, but many other systems are facing budget cuts.

The need for reliable funding is leading some libraries to group. Earlier this year, the city of Tucson began transferring control er the Tucson-Pima Public Library to the county of Pima, which enjoys healthier revenue stream from property taxes. This move will mean anges in how construction projects are run, but Pat Corella, the library stem's deputy director, believes these changes will be for the better— d he's already thinking about what future branches will look like.

In the not-too-distant future, Corella predicts librarians will no ger sit behind desks but instead wander through the library with hand- ld computers, asking patrons if they need assistance finding resources. e number of books in a branch library may keep shrinking, but the insti- ion itself will be there as long as it remains true to its roots. "The library a community space that began as an educational institution for self- ected learners," he observes. "That's the real ideal of intellectual freedom, d you will not find a more democratic institution than the library." ■



The glazed facade of Dattner Architects' Bronx Library Center, in New York, allows passersby to see activity within, harkening back to the Carnegie era.



A kinetic steel boat sculpture sails above the roofline of Carlson Architects' Beacon Hill Branch in Seattle. Each new library there features public art.

Hyde Park Miriam Matthews Library

Los Angeles, California

1

HODGETTS + FUNG CREATES A BRANCH THAT ENGAGES THE STREET IN A LIVELY MANNER WHILE HANDLING DIFFICULT SECURITY ISSUES.

By Clifford A. Pearson

Architect: *Hodgetts + Fung Design and Architecture—Craig Hodgetts, AIA, Hsin-Ming Fung, AIA, design principals; Greg Stutheit, project manager; Ron Calvo, project architect; David Wick, Michael Knopoff, project team*

Client: *Library Facilities Division, Los Angeles Public Library*

Engineers: *Englekirk and Sabol (structural); The Sullivan Partnership (mechanical); Patrick Byrne Associates (electrical); Delon Hampton & Associates (civil)*

Consultants: *Katherine Spitz & Associates (landscape); Robyn Strayhorn (mural artist)*

General contractor: *Royal Construction*

Size: *10,500 square feet*

Cost: *$3.15 million*

Completion date: *December 2004*

Sources

Parallam manufactured lumber: *Trus Joist MacMillan*

Cement board: *Foundry Services and Supplies*

Metal roof: *Berridge Manufacturing*

Cabinetwork: *JU Construction*

Tile: *Dal-Tile*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

Built at the epicenter of the 1992 Los Angeles riots, the Hyde Park Miriam Matthews Branch Library stands as a testament to civic renewal and the healing power of architecture. More than just a place to read or gather, the library reaffirms the city's faith in South Los Angeles as a vibrant neighborhood and a generator of hope.

Program

Part of an ambitious program to build 36 libraries in communities around Los Angeles, the Hyde Park branch needed to make a statement that reinvestment in small-scale civic structures could make people's lives better. Although just 10,500 square feet, the new library offers almost twice the number of volumes as the neighborhood's old facility (40,000 books, compared with 25,000). And it nearly triples the number of computer terminals to 28, up from 10.

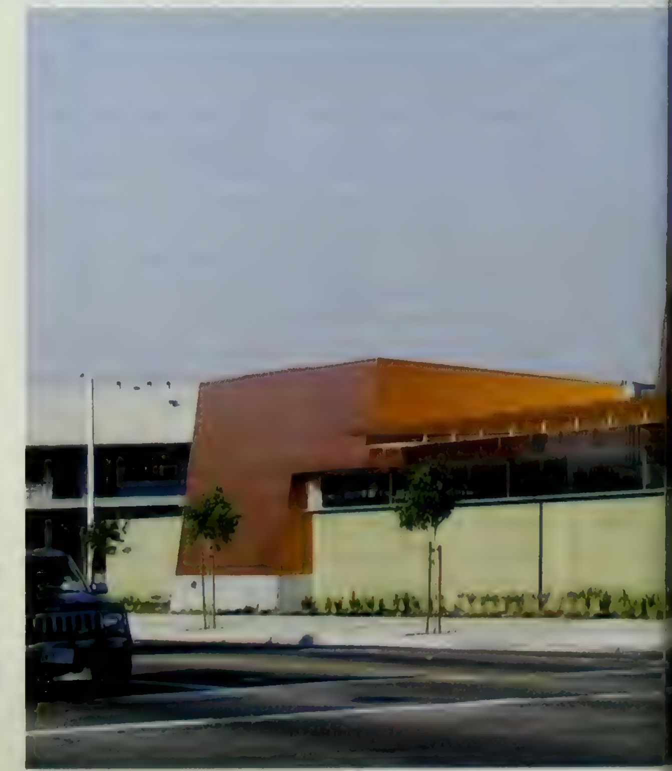
Solution

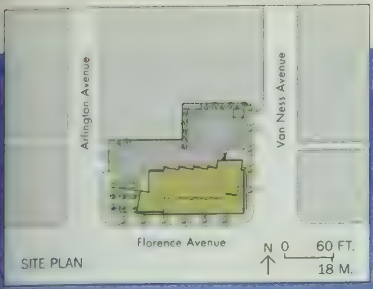
Hodgetts + Fung originally envisioned the Hyde Park library as an exercise in glass and colored light. But the client wanted something bolder, so principals Craig Hodgetts, AIA, and Hsin-Ming Fung, AIA, decided to give the building a more sculptural presence. "We looked at Brancusi's work because it has such great energy," says Hodgetts.

Eventually, the architects designed the building with angled glue-laminated-wood columns and beams on the inside and moss-colored cement-board walls on the outside. "We wanted it to be muscular, to have an animal-like quality to it," explains Fung.

Sitting on a corner site, the building offers four different faces to its surroundings. While all elevations emphasize masonry at street level and glazing above (for security reasons), each has its own personality. The south-facing street front expresses a sense of motion with long, linear composition of glass a cement board topped by a copper-tinted-steel sawtooth roof. On the north, where patrons enter from th parking lot, the architects greet them with a jazzy series of angled wood-frame brise-soleils projectin from the facade. The shorter side elevations speak in quieter tones.

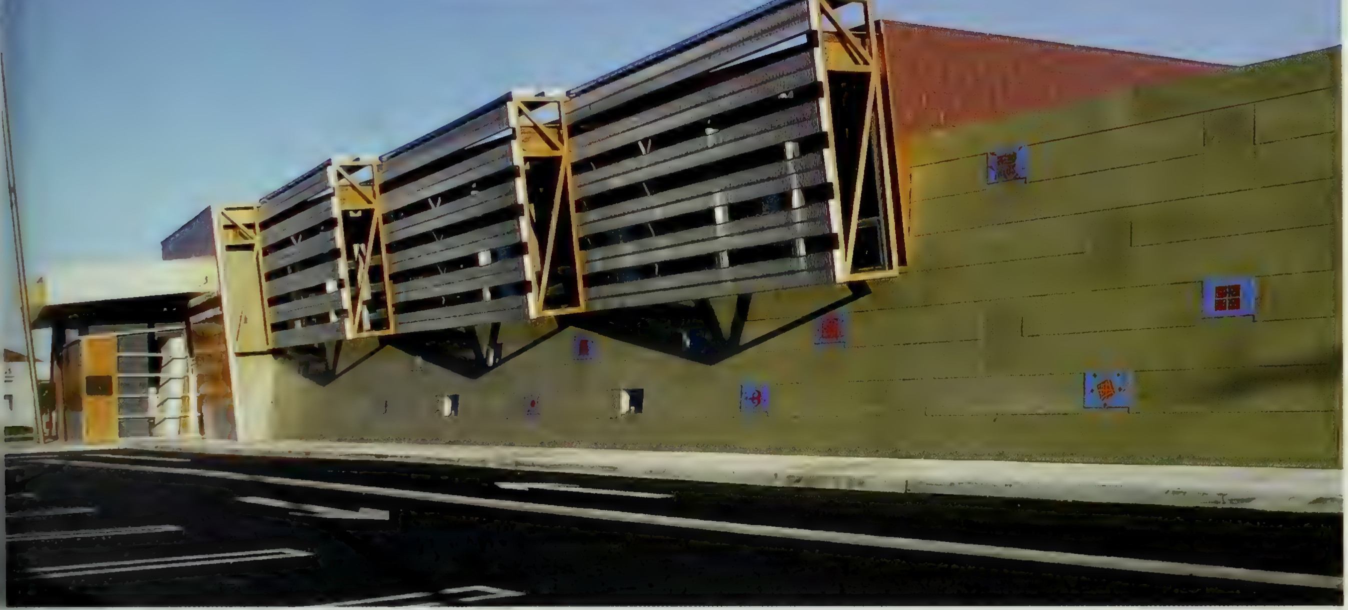
In plan, the library is essentia a simple rectangle, but Hodgetts Fung embued the interiors with a

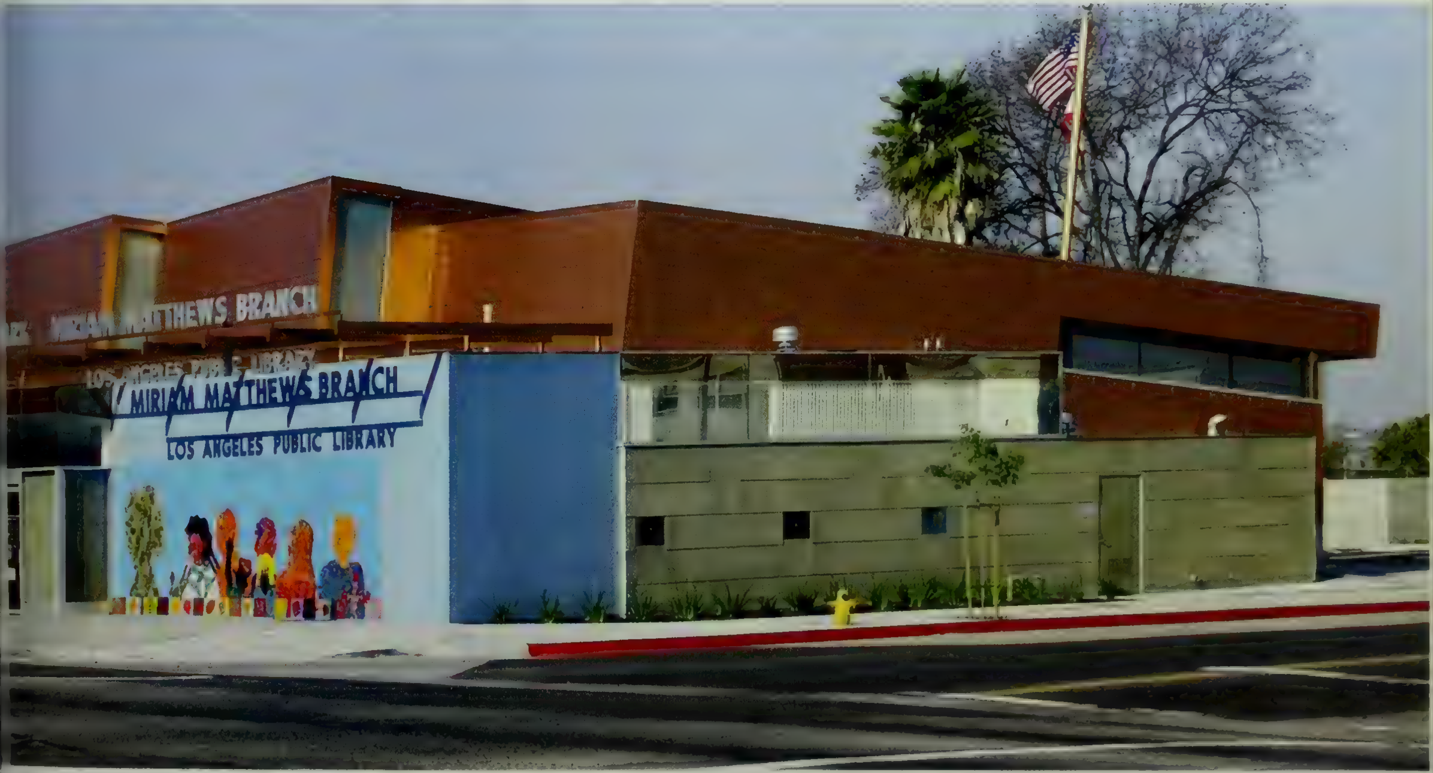


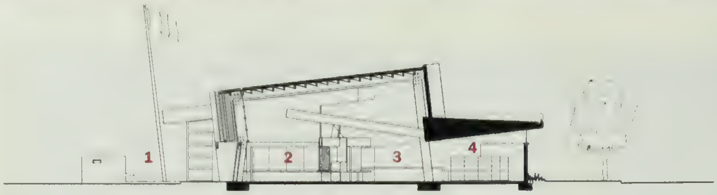


SITE PLAN

The architects limited glazing mostly to upper portions of the building for security reasons, while adding projecting brise-soleils to the parking elevation (below), and a mural by Robyn Strayhorn to the street facade (bottom).

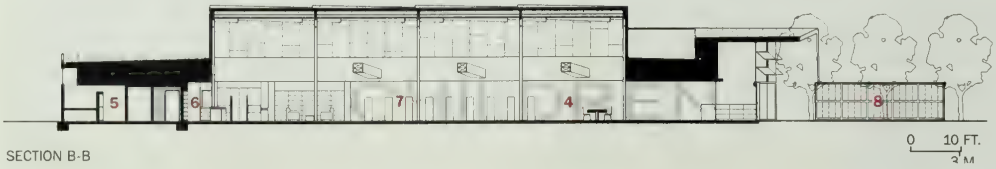






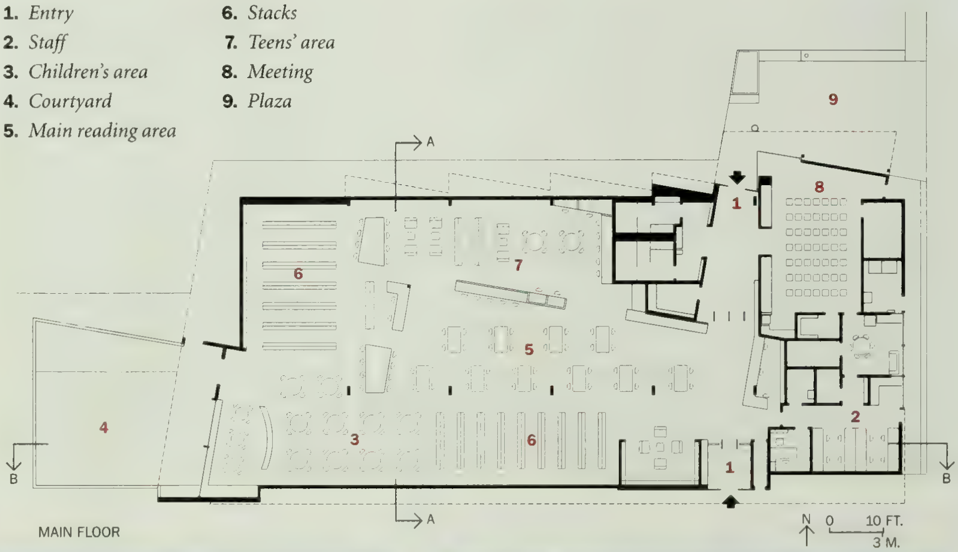
SECTION A-A

1. *Plaza*
2. *Teens' area*
3. *Main reading area*
4. *Children's area*
5. *Staff*
6. *Entry*
7. *Stacks*
8. *Courtyard*

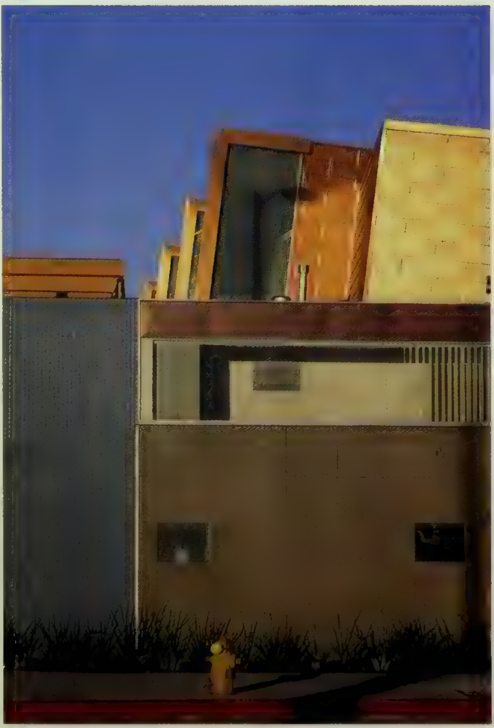


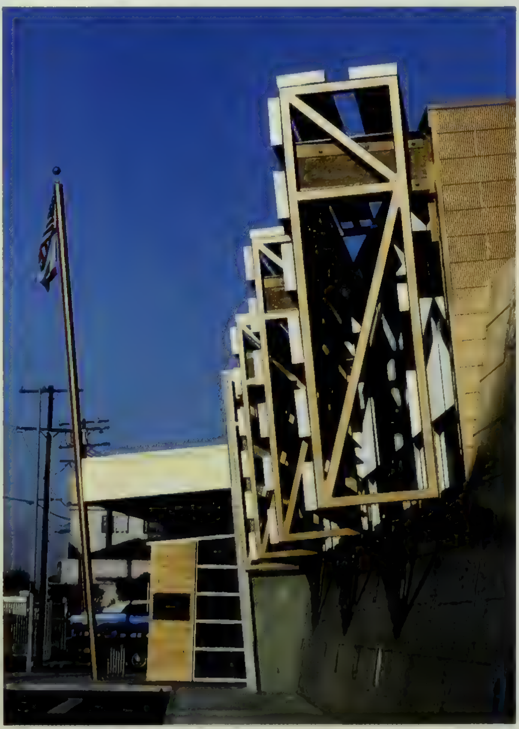
SECTION B-B

1. *Entry*
2. *Staff*
3. *Children's area*
4. *Courtyard*
5. *Main reading area*
6. *Stacks*
7. *Teens' area*
8. *Meeting*
9. *Plaza*



MAIN FLOOR





visual richness by layering materia and angled forms in a syncopate rhythm. "We wanted it to feel like jazz," says Fung. They also chose colors—moss green, copper, burgundy, and burnt orange—that evoke the roots of the African-American culture of most Hyde Park residents.

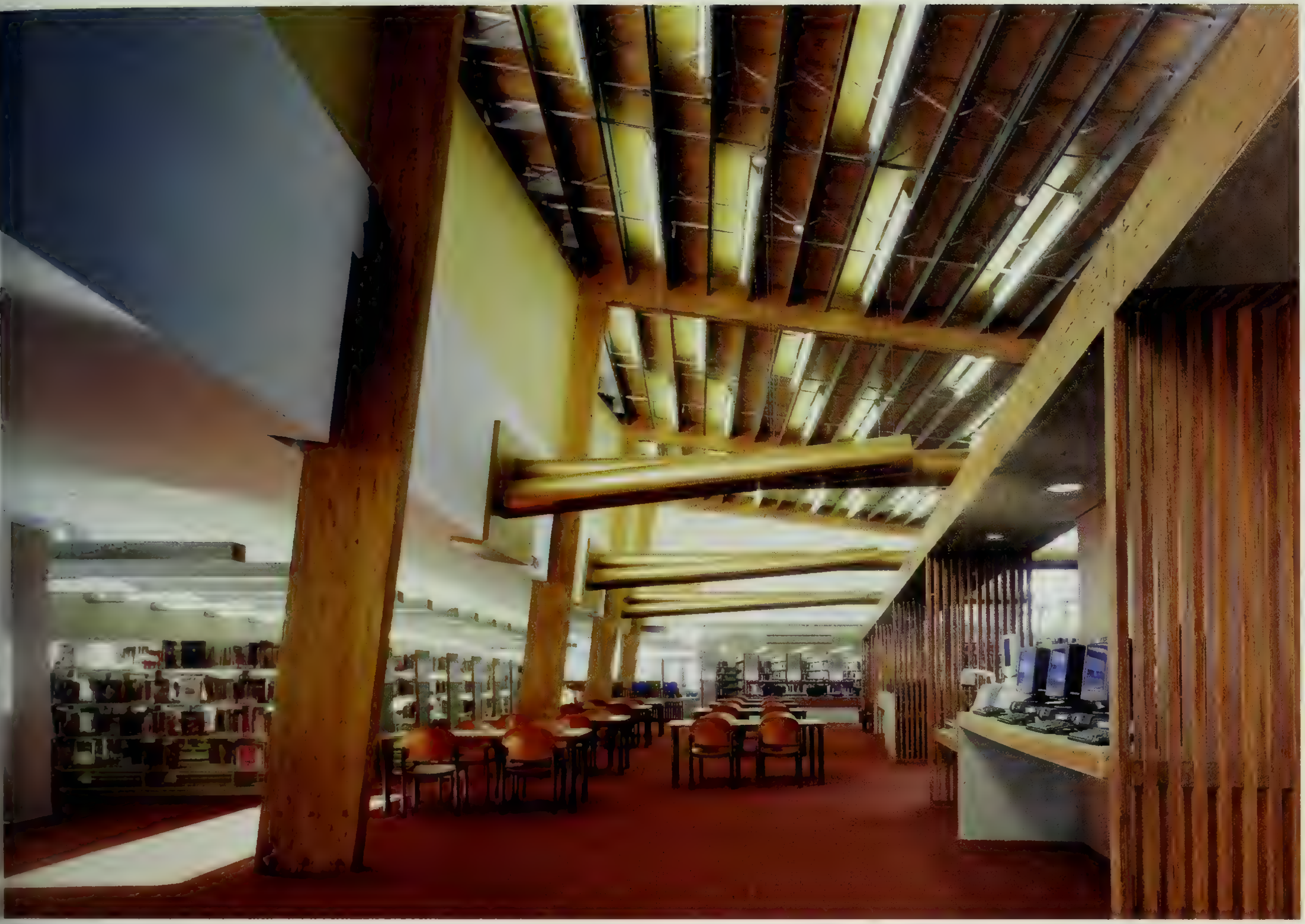
Although the library didn't apply for LEED certification, Hodgetts + Fung designed the building to achieve a Silver LEED rating, using sustainable materia such as wood beams made from recycled lumber chips, sun-shadi devices such as brise-soleils, an an entry canopy on the street facade clad with photovoltaic cel

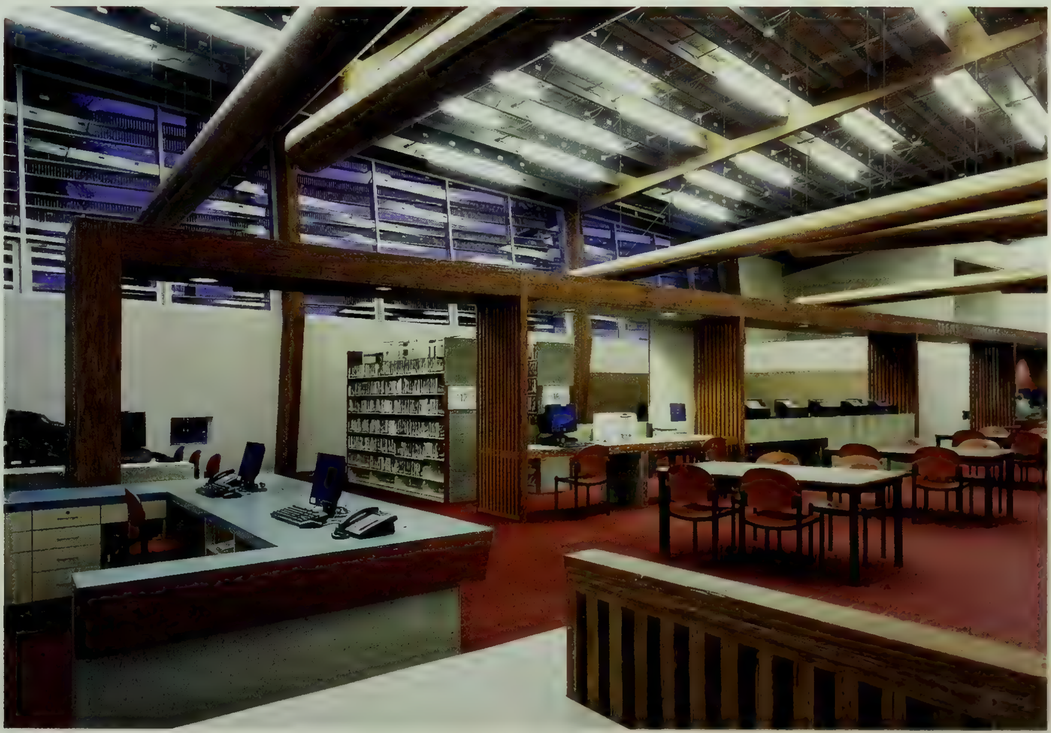
Although masonry walls at street level provide security, clerestory glazing and 22-foot-hi ceilings create a bright, lively interior. By tilting the ceiling up towa the south, the architects oriente views to treetops and sky outside As a result, they focused attenti on slices of nature, adding a buc note to the urban setting. Expos air ducts slicing overhead and fluorescent tubes arranged in an irregular pattern add to the vibra feeling of the library.

The community has respond well to the new building, says Kr Malone, the branch's senior libra ian. Usage has roughly tripled to about 800 people each day, she reports, and no one has "tagged the building with graffiti.

Commentary

Some Modernists try to boil architecture down to minimal expressions of form and function. But Hodgetts and Fung like to bri temperatures up in their work, so different flavors and textures mix together without losing their indiv ual identities. Instead of consomm they cook up architectural gumbo At the Hyde Park branch library, they did this by layering materials colors, and light into a spicy com sition that is engaging and easy t understand. They have created a big, soaring space that says lear ing is important, but made sure it a fun place to hang out. ■





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lly one open space,
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eas for reading and
wsing by changing
ling heights and
ng stacks as dividers
ove and right).

Quincie Douglas Library

Tucson, Arizona

2

RICHÄRD + BAUER EMPLOYS LEAN LINES, BRITTLE MATERIALS, AND ARCING FORMS TO DRAMATIC EFFECT IN A DESERT SETTING.

By Suzanne Stephens

Architect: *Richärd + Bauer—James Richärd, AIA, design architect; Kelly Bauer, interior/project manager; Steve Kennedy, AIA, architect; Erik Koss, job captain*
Client: *City of Tucson and Tucson-Pima Public Library*
Engineers: *KPFF (civil); Jerome E. McGetrick and Associates (electrical); Clayton Engineering and Consulting (mechanical and plumbing); Caruso Turley Scott (structural)*

Size: *10,500 square feet (gross)*
Cost: *$1.5 million*
Completion date: *September 2005*

Sources
Window wall, entrances: *U.S. Aluminum*
Polycarbonate resin sheeting: *Polygal*
Plastic laminate interior finishes: *Wilsonart; Formica*
Special surfacing: *Corian*
Polished concrete and terrazzo flooring: *Advanced Terrazzo*
Acoustical ceiling and suspension grid: *USG*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

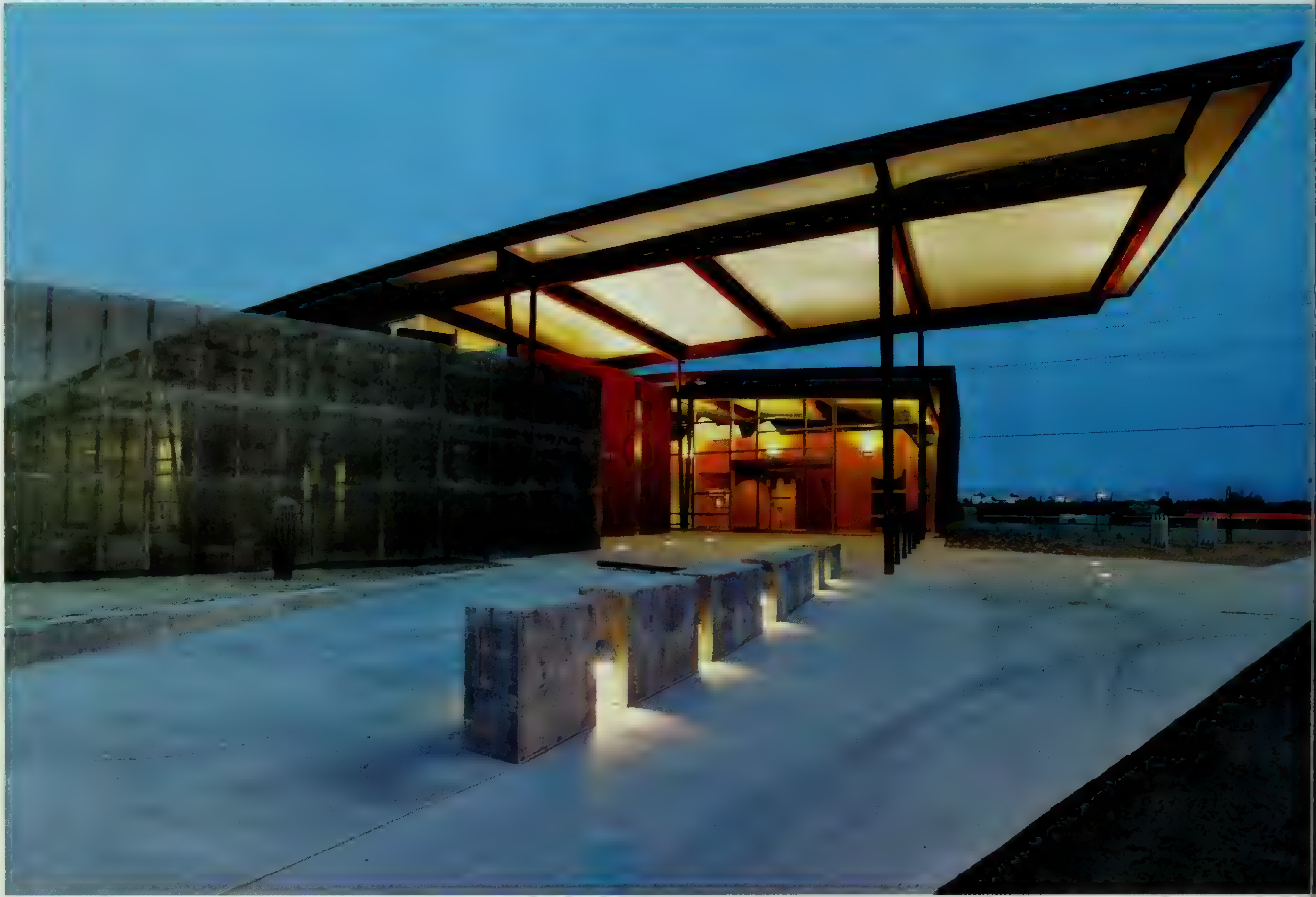
When last we left Richärd + Bauer, an up-and-coming architectural office in Phoenix, Arizona, it had just completed the delicately limned Desert Broom Library in its hometown [RECORD, January 2006, page 96]. In the fast-growing sunbelt states, public libraries appear to be the building type du jour, and this firm, having completed five lean, Modern branch libraries, with four more under construction, could claim to have cornered the Arizona market. Its principals, James Richärd, AIA; Kelly Bauer, an interior designer; and Steve Kennedy, AIA, have now taken on Tucson, where their pavilionlike Quincie Douglas Library opened last year. The brittle materials of the one-story structure, marked by a Cor-Ten-steel roof and rusted steel fencing, blend in color and texture with the flat, dry desert backdrop, while the library's curved and angled planes stand out rakishly against the monotony of nearby suburban sprawl.

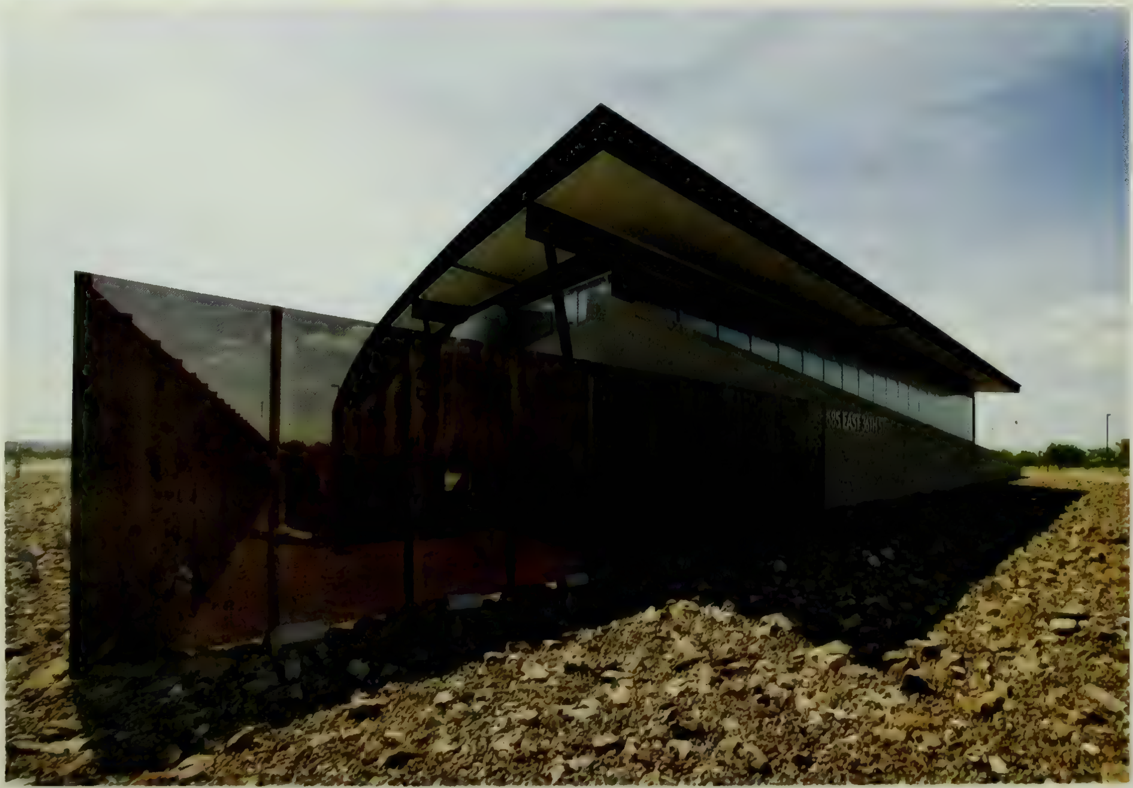
Program

In 1999, the Tucson-Pima library system organized an anonymous design competition for a 10,000-square-foot branch that would be located adjoining the Quincie Douglas Neighborhood Center on the dusty outskirts of the city. Serving an area of about 70,000 people, many of whom are low-income and Hispanic, the library would provide a reading room for retrieving books (numbering about 50,000) from the open stacks,

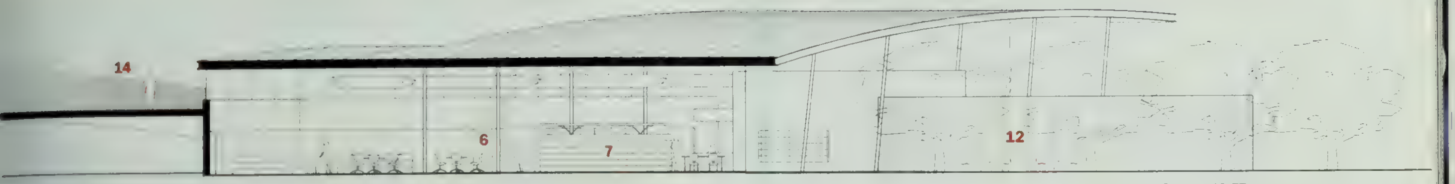
PHOTOGRAPHY: © TIMMERMAN PHOTOGRAPHY

he Cor-Ten-steel roof
nd a curved, rusting
teel-mesh fence
nclosing an outdoor
arden (right) mark the
ntrance to the library.
he path from the
eighborhood center's
arking area leads
ast a red, stuccoed-
oncrete-block wall
elow), where spindly
-shaped steel columns
eminiscent of Le
orbusier's Salvation
rmy complex in Paris
933) support the roof.



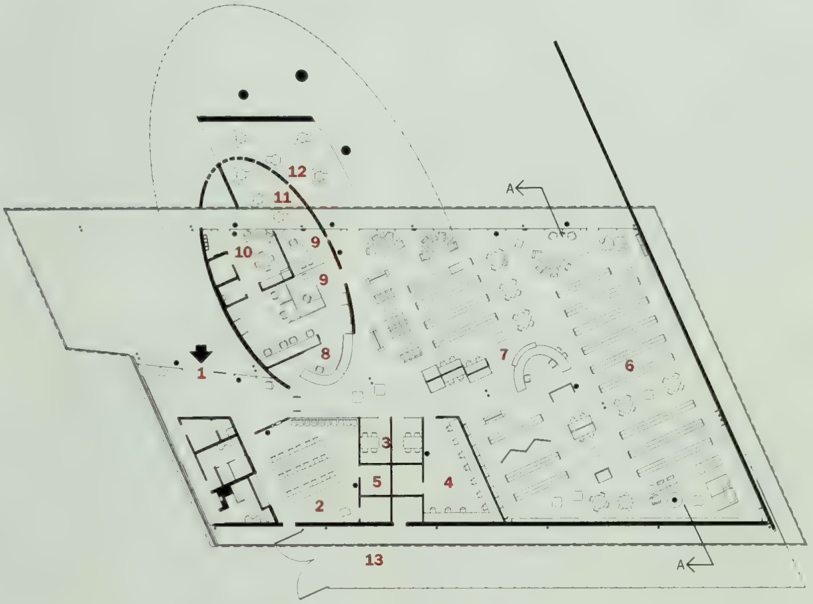


**At the library entranc
the building's steel r
thrusts forward as a
porte cochere (above
Clerestory windows
surfaced in polycar-
bonate resin (left), a
walls are sandblaste
or stuccoed concrete
block. Richärd + Ba
had designed a pede
trian bridge to skim
past the mechanical
yard facing 36th Stre
(left), a prime elevat
but so far the bridge
has not been built.**



ECTION A-A

1. *Entry*
2. *Lecture room*
3. *Group study*
4. *Computer room*
5. *Storage*
6. *Open stacks*
7. *Information desk*
8. *Service desk*
9. *Administration*
). *Staff lounge*
L. *Staff patio*
2. *Reading garden*
3. *Mechanical yard*
1. *Planned pedestrian bridge*



MAIN FLOOR

ıs rooms for lectures, conferences, ıd computers. Financed through city nds, the library was budgeted at .3 million, or $130 per square foot.

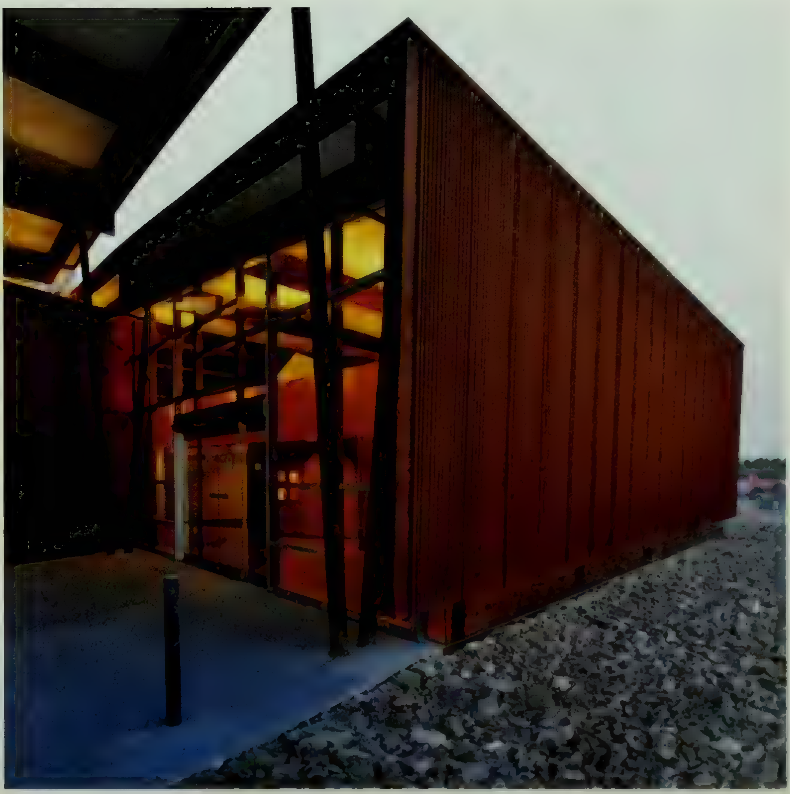
lution

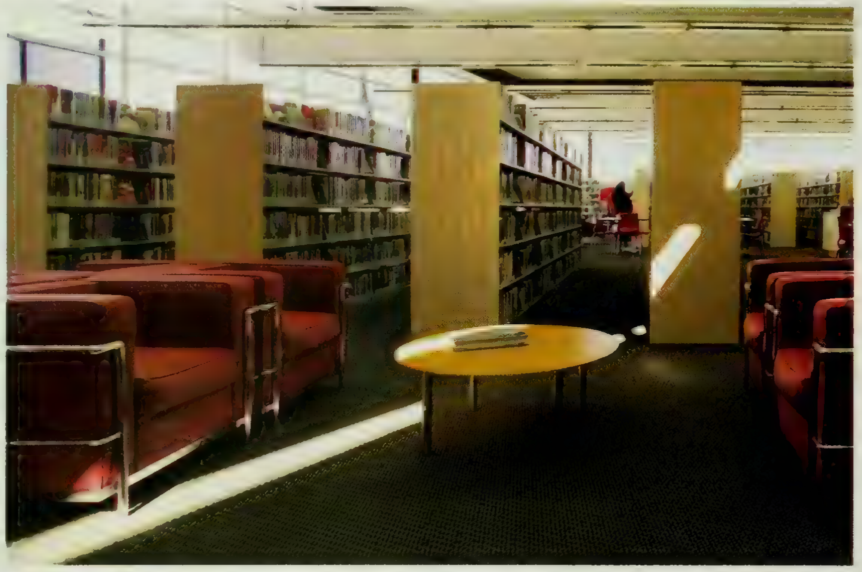
ıce the 1.5-acre site occupies a adrant at a heavily trafficked ossroads, Richärd + Bauer pro-ted a pedestrian bridge that uld cross a six-lane highway and nnect residential development on e east to the one-story library and e existing community center.

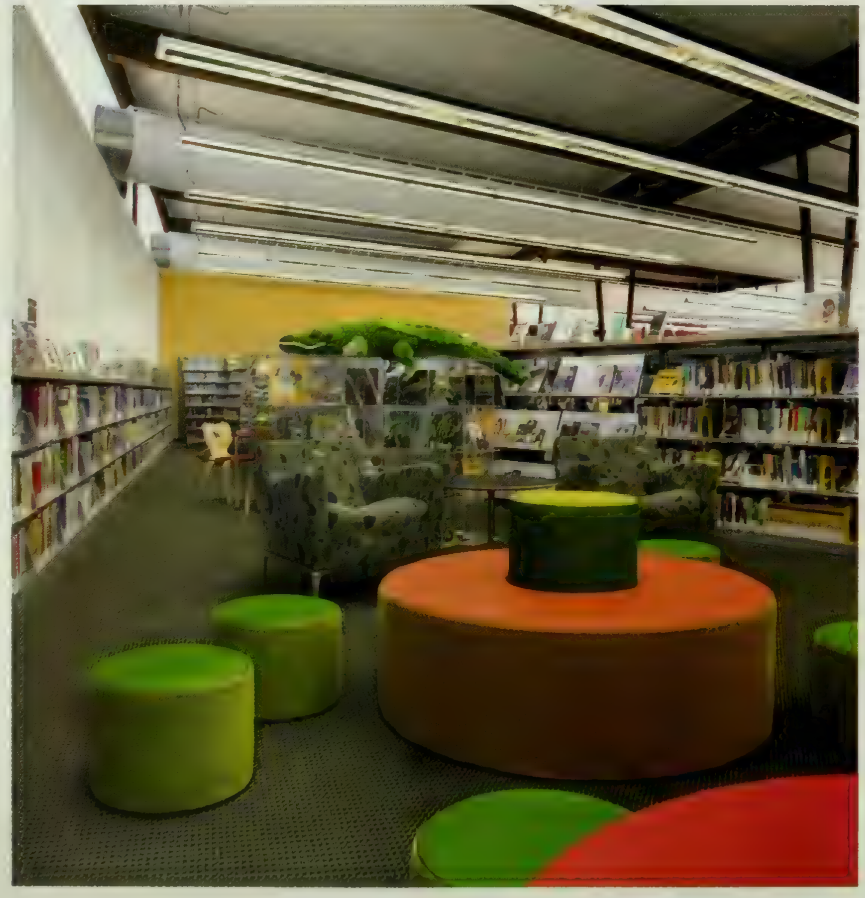
Paralleling the extended arc of s steel-and-concrete bridge (which still unbuilt), the firm designed the ary's roof, clad in corrugated Cor-ı-steel panels, to split in two long tals" so that one portion lifts up ghtly above the other. The archi-ts filled in the space between petals with polycarbonate resin eets to create a clerestory that nits daylight to the library's interior.

Within the polyhedron-shaped ıce inside, a large oval counter and

The end wall of the library, enclosing the entrance (right), is surfaced in Cor-Ten-steel panels, as a continuation of the roof plane. As Richärd says, "The split roof gives topography to the space without adding complexity to the plan."







The main reading room features open stacks (top) and a separate area for children (above). The library receives extra light through clerestory windows and an exposed ceiling. Partner Kelly Bauer sought muted yet still vibrant colors for the furnishings, along with comfortable chairs based on Le Corbusier's Grand Confort design (top).

light bar define the operating core the library that accommodates bo check-out-and-return functions, alo with staff offices. As a motif, the o extends out beyond the exterior of the building, where red pylons of st- coed concrete block enclose a sta patio. Another larger arc, rendered steel mesh, forms the perimeter o the landscaped reading garden.

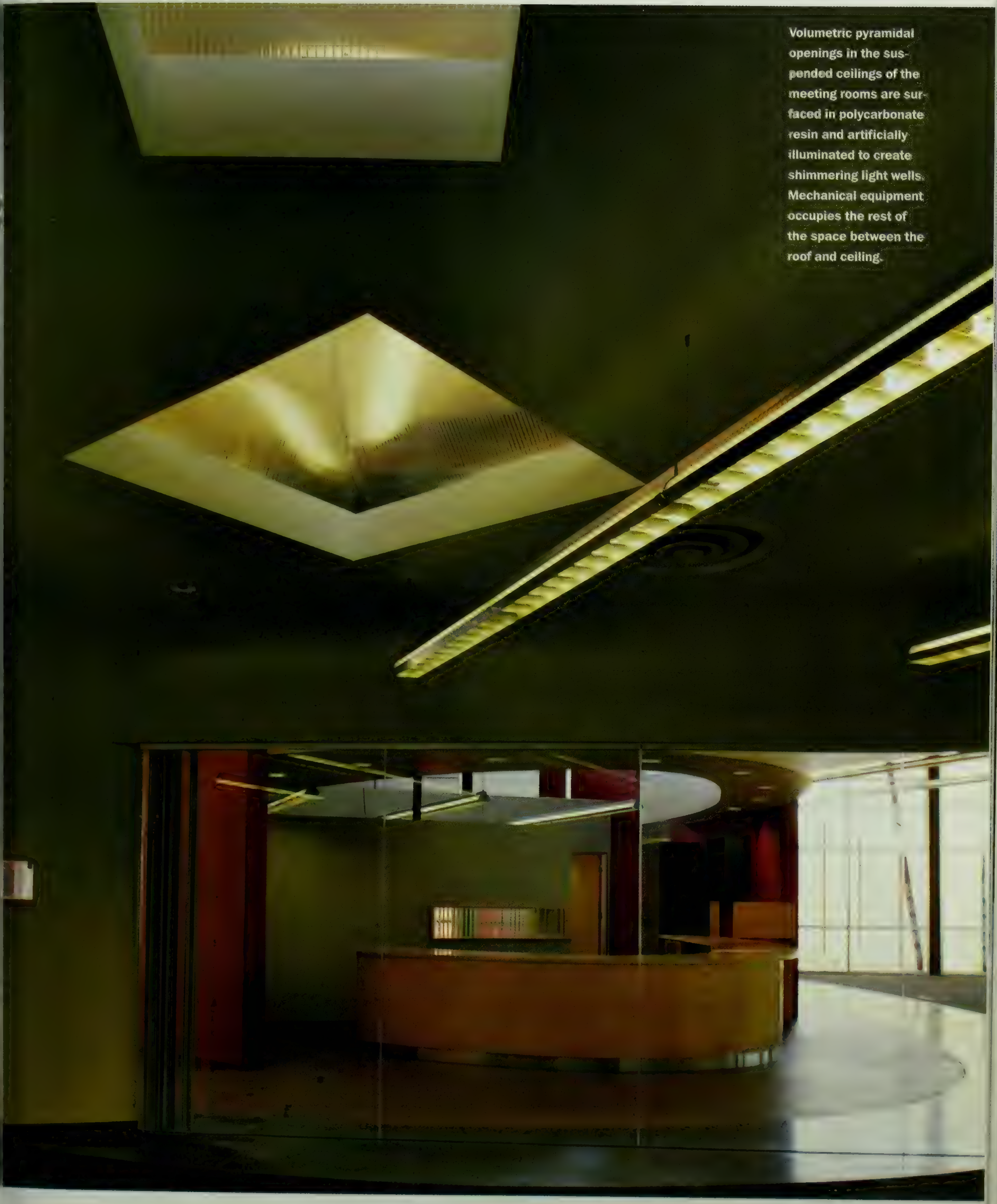
A relatively simple structural system kept the costs down: A ste frame infilled with wood truss joist supports the roof, while concrete block, either stuccoed or sandblasted, constitutes the exterior wa except where the Cor-Ten-steel ro slides to the ground at the entran The polycarbonate-resin sheets in split roof reappear in the clerestori on the south and east walls and again in pyramid-shaped faux sky lights over the meeting rooms.

Commentary

The jaunty library with its now-rusted steel-wire fencing and Cor-Ten corrugated skin creates an identifiable but not forbidding structure that meshes with the dry landscape of acacia, saguer cactus, and wild brush. The light and airy main reading room, with exposed structural and mechani elements zooming across the ce ing, imparts a sense of casual bu quiet relaxation.

According to Pat Corella, th deputy director of the Tucson-Pi Public Library system, the buildi is successfully luring the commu nity to come inside, although ma people are disappointed that the pedestrian bridge, a favorite element in the initial scheme, has n yet been constructed. The bridge would have concealed the mech ical yard, which is now visibly pa of the street facade. According t Corella, residents lament, "We d want to look at a lot of pipes."

The best way to fix this is to build the much-needed bridge. In meantime, the library still demon strates how broad, simple stroke (the roof), straightforward mainte nance-free materials, and imagina use of toplighting can make a sig cant architectural impact. ■



Volumetric pyramidal openings in the suspended ceilings of the meeting rooms are surfaced in polycarbonate resin and artificially illuminated to create shimmering light wells. Mechanical equipment occupies the rest of the space between the roof and ceiling.

Ballard Library
Seattle, Washington

3

BOHLIN CYWINSKI JACKSON SEAMLESSLY UNITES LIBRARY AND CIVIC FUNCTIONS UNDER A GREAT SWEEP OF PLANTED ROOF.

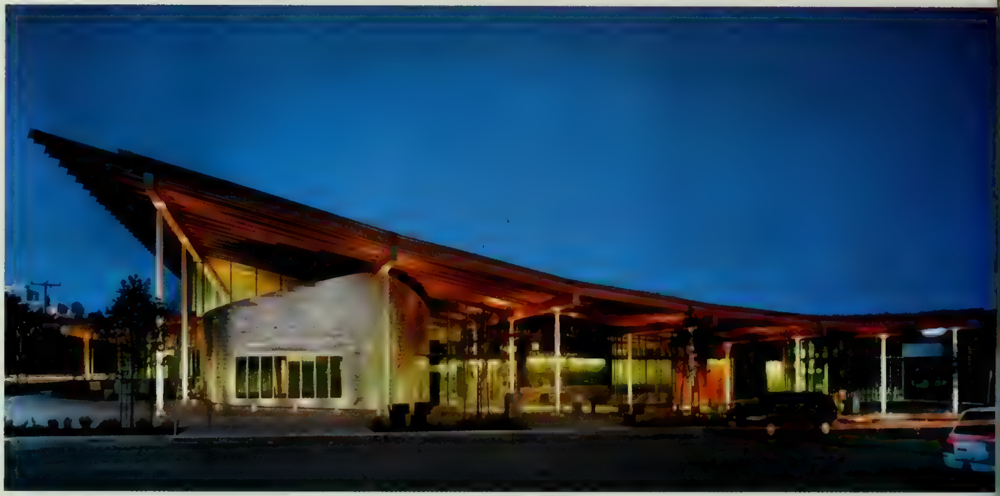
By James S. Russell, AIA

Architect: *Bohlin Cywinski Jackson—Peter Q. Bohlin, FAIA, Robert E. Miller, AIA, David Cinamon, AIA, Steve Mongillo, AIA, Nguyen Ha, Eric Walter, Stephen Gibson, Darren Lloyd, Zeke Busch, Daniel Ralls*
Consultants: *Putnam Collins Scott Associates (structural engineer); Affiliated Engineers (mechanical, electrical); Swift & Company (landscape); Candela (lighting)*
Contractor: *PCL Construction*

Size: *15,000 square feet (library); 3,100 square feet (neighborhood service center); 15,000 square feet (parking)*
Cost: *$6,500,000*
Completion date: *May 2005*

Sources
Green roof system: *Hydrotech*
Metal/glass curtain wall: *EFCO*
Metal shingles: *Ettel & Franz*
Louvers: *Construction Specialties*
Solar panels, film: *Schott*
Lighting: *Lithonia, Ledalite, Linear, Kim, Mteallus, Kurt Versen (interior general); A Light, Juno Flex, Alkco, Elliptipar (task lighting); Smedmarks, Bega, Design Plan Centaur, Lumier, Hydrel, Stonco (exterior)*
Furniture: *BCJ Ballard Collection; Herman Miller*

For more information on this project, go to Building Types Study at **www.archrecord.com**.



Rem Koolhaas left no high-concept gesture behind in his widely acclaimed Seattle Central Library [RECORD, July 2004, page 88]. In general, though, Seattleites shun assertive, big-idea architecture. But a modest neighborhood northwest of downtown found in Bohlin Cywinski Jackson (BCJ) an architect willing to think small in just the way it wanted. Each element of the firm's Ballard Library is painstakingly deployed to do low-concept (in the best sense) double or triple duty.

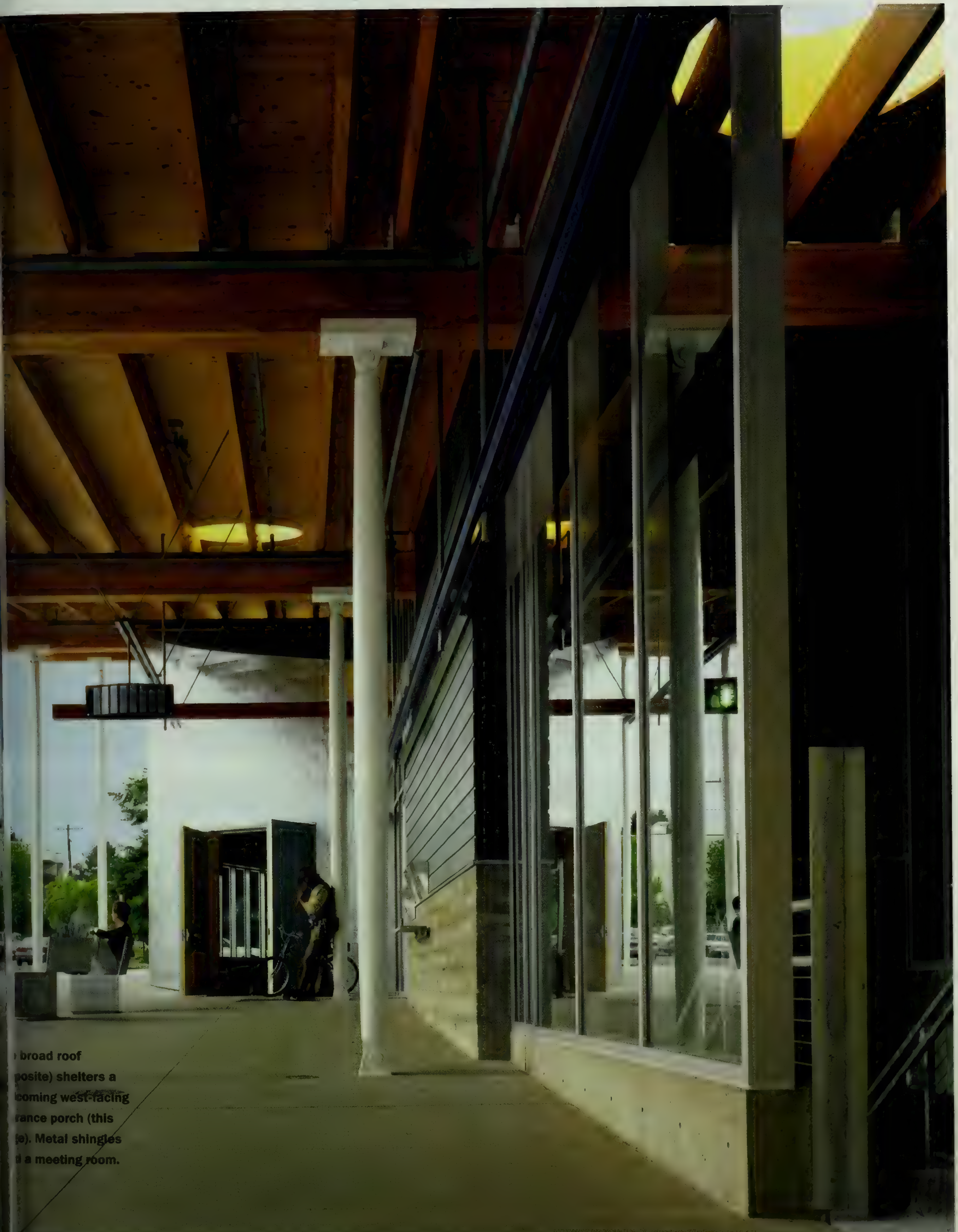
Program

For its branch system, Seattle has stuck with relatively small neighborhood facilities. The 15,000-square-foot Ballard branch is one of five recent replacements in a large-scale overhaul of the city's 27 satellite libraries (all by local architects, including Miller/Hull and James Cutler). Ballard is among the largest (some are as small as 5,000 square feet). "With technology changing and the central library as a hub, we can provide appropriate services in branches of these sizes," explained David Kunselman, Seattle Public Library's senior capital projects manager. "And they have a more neighborhood feel."

That's important in Seattle, where neighborhoods strenuously guard their prerogatives. Residents participated in the selection of BCJ, and pushed an ambitious agenda of environmental sustainability. The library plan also incorporated a neighborhood service center where people can pay taxes and utility bills and deal with city agencies without going downtown. Another convenience is provided by radio-frequenc identification tags, like those retaile use, which allow books requested online to be automatically routed t branches for patrons to pick up an check out on computerized kiosks.

Solution

A broad, planted roof, the library's signature gesture, curves gently u on its northern edge, opening clerestories underneath to sweep daylight inside. The roof not only speaks of shelter, it portrays the environmental agenda, a key educational aspect of the design. "If you interest kids, they bring their parents," increasing use and support, explained Robert Miller, BCJ's project manager. Seeded with drought-resistant local plants, the



broad roof
posite) shelters a
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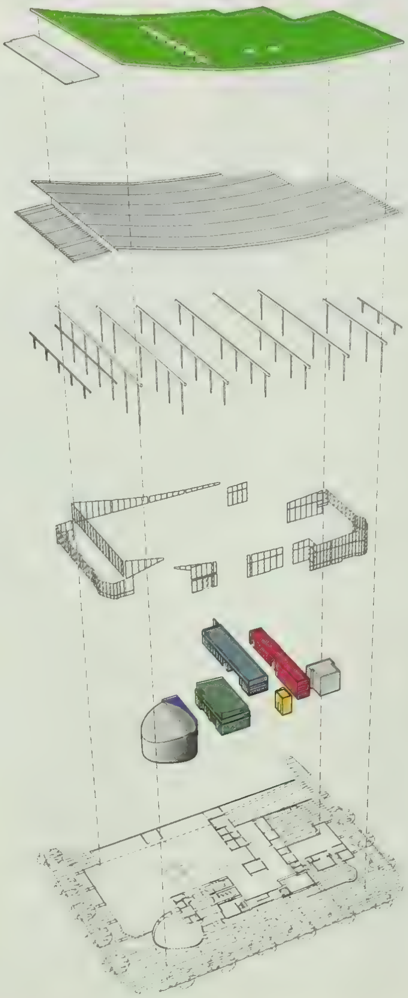
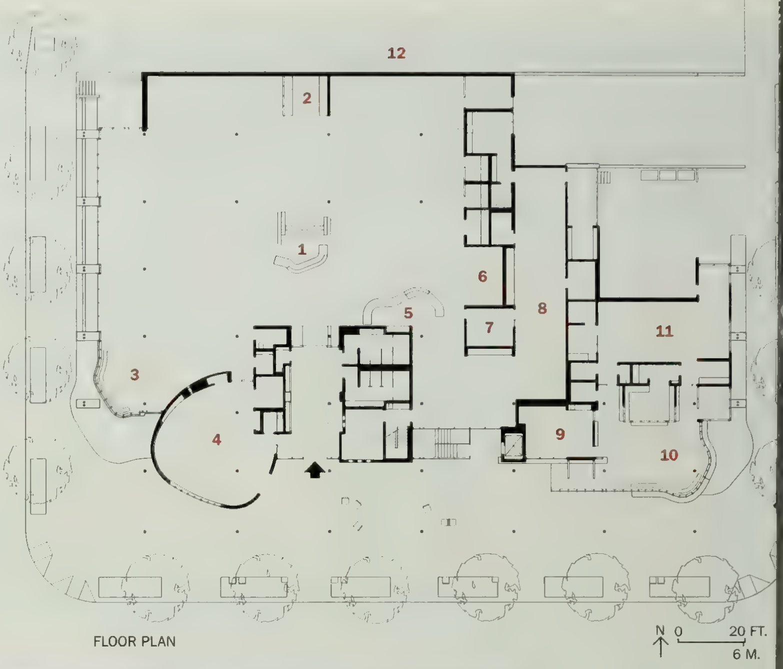
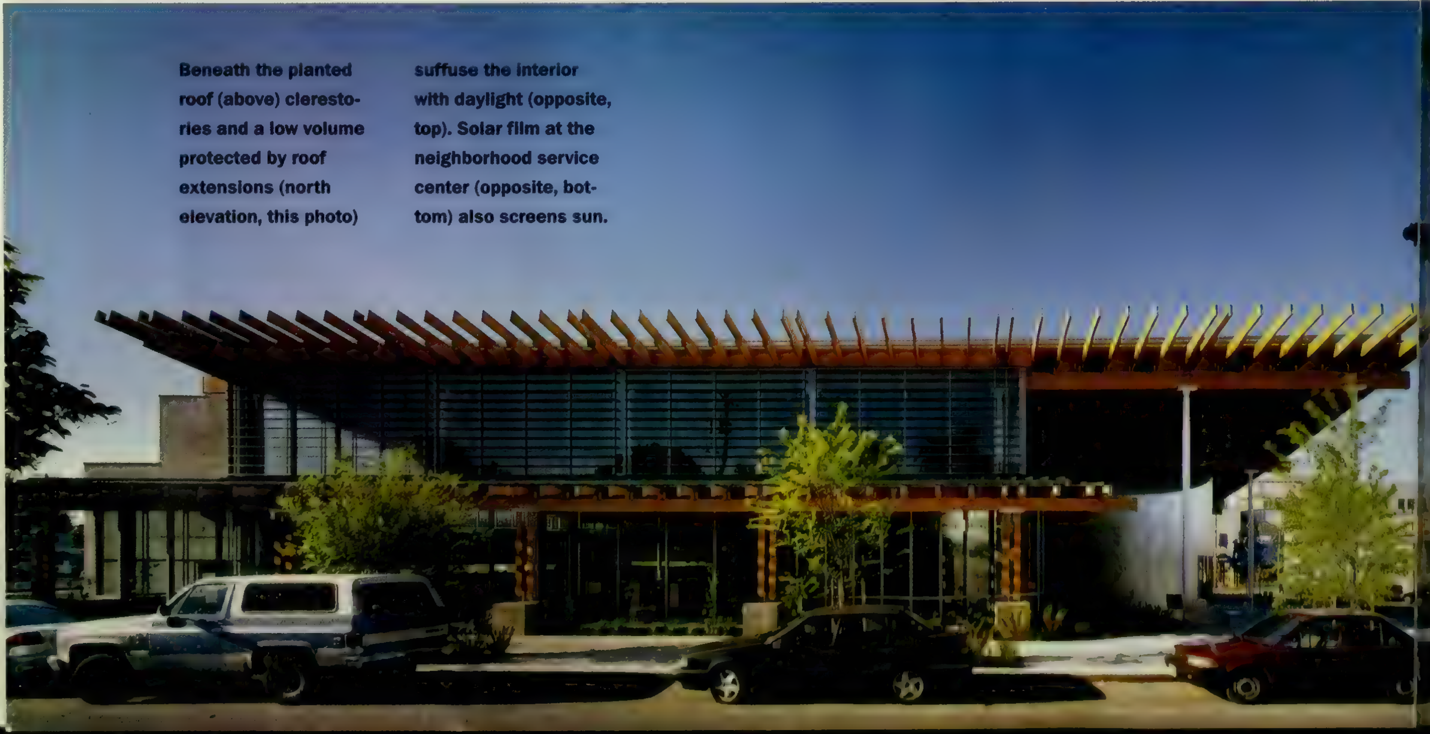




FLOOR PLAN

1. *Reference*
2. *Quiet room*
3. *Children's area*
4. *Multipurpose*
5. *Circulation desk*
6. *Reserves*
7. *Branch manager*
8. *Library staff*
9. *Conference*
10. *Neighborhood service center*
11. *NSC staff*
12. *Future developm*



Beneath the planted roof (above) clerestories and a low volume protected by roof extensions (north elevation, this photo) suffuse the interior with daylight (opposite, top). Solar film at the neighborhood service center (opposite, bottom) also screens sun.

f absorbs 86 percent of the site's rm runoff and reduces heat gain. rary users can inspect the roof person by permission.) School ldren—and everyone else, for t matter—can monitor its growth ough periscopes mounted near entrance. A small lobby exhibition lains its advantages and those of ner sustainable elements, such as tovoltaic panels on the roof and laylighting scheme—refined at Seattle Daylighting Lab—that es clerestories and skylights, supmented by light fixtures equipped h sensor-driven dimmers.

BCJ pushed the building to western edge of the site and tched the roof over an entrance ch that cuts the setting sun. The ch unites entrances for the library, neighborhood service center, and a metal-shingled meeting room that can be used even when the library itself is closed. People naturally gather underneath—its evident welcome contrasts with surroundings that remain largely devoted to unappealing surface parking.

Another advantage of locating the building on the western street edge was that it freed up space on the site that was later sold to a multifamily-housing developer. The proceeds from this sale offset the expense of building underground parking. Knockout panels in the garage wall facing the parcel will allow the library to share parking with the future development.

Inside the library, tapering steel tubes support a laminated-beam ceiling. A plane of suspended ventilation ducts, and several enclosed areas

that huddle under the ceiling, visua dissolve the borders of the space. kind of spatial indeterminacy reins "open-ended," as partner in charg Peter Bohlin describes it. "People want to be in a softly defined spac he said, rather than in more "singl minded" architecture.

Even this logic has a sustainable dimension. By separating elements, and avoiding laminated composite assemblies, BCJ facilita eventual recycling. Wood beams c be unbolted from steel supports, f example, and an aluminum windo wall can be readily dismantled.

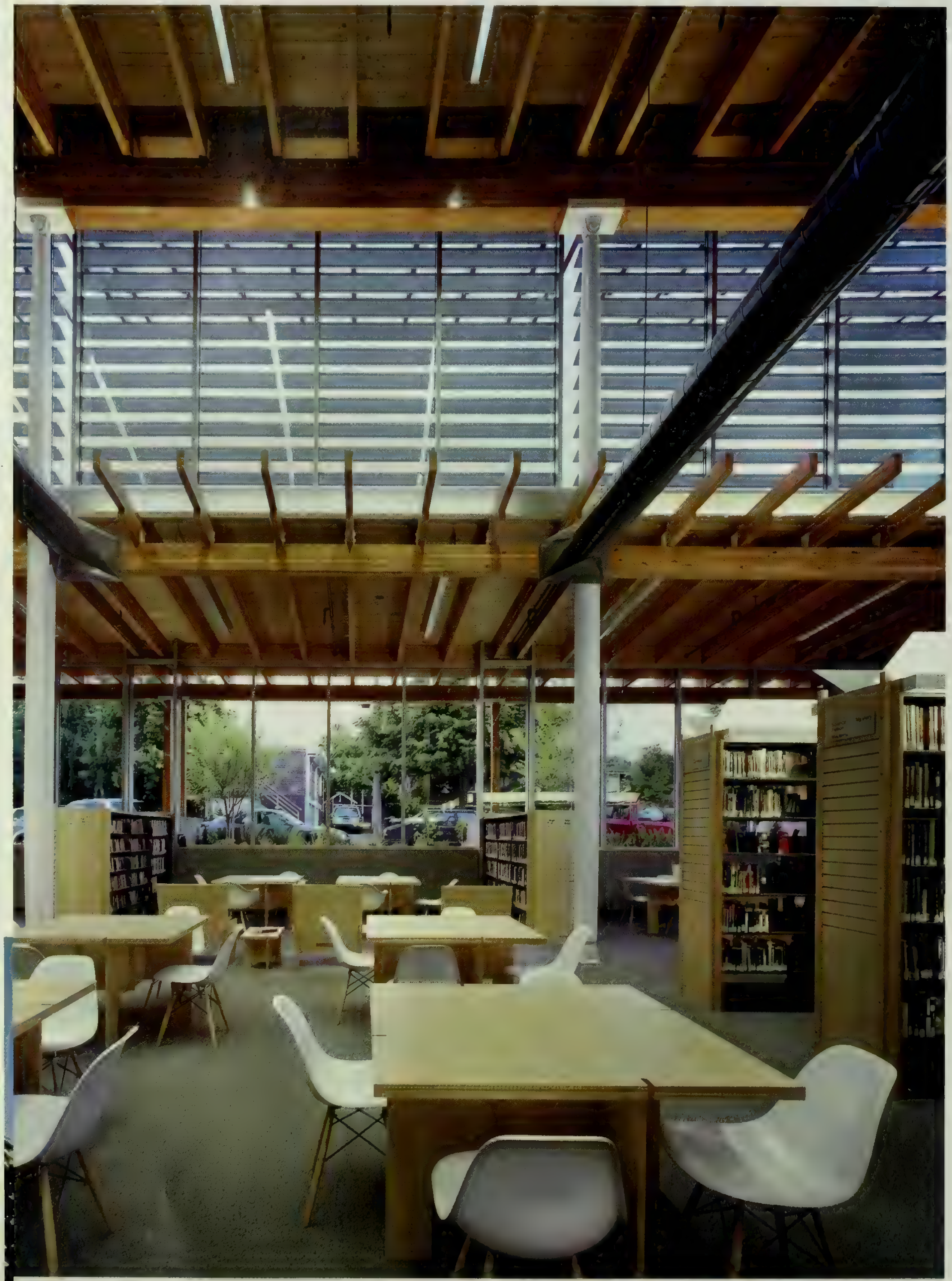
Does the plethora of forms a textures mix too many metaphors By distinguishing materials, "you embed an understanding of how you make things at an aesthetic level," explains Bohlin. "And you make it easier to meet the budge

Commentary

The Ballard Library subtly but tho oughly responds not just to the program, but to the civic role a library can play. It seamlessly wra conventional library functions wi a public meeting room and neigh borhood service center, creating true community forum. (Kudos al go to the city agencies that enth siastically cooperated to make th mix happen.) In addition, sustainable strategies fit unusually well and contribute to the appeal of using the library.

The library's distinctive swe of roof effectively signals its civic nature and environmental agend Underneath, Bohlin Cywinski Jackson has fussed with too ma shapes—responding to an obses sional local fear that anything larger than domestic scale is ove monumental. That's too bad, because this is a building with co victions that shouldn't look like it having an identity crisis.

The daylit main space, alrea treasured by locals, is the buildin glory. It diffuses full sun while remaining softly bright even on oppressively cloudy days. This is no mean feat in a city where grea public interior spaces can be counted on one hand. ■



A low-ceilinged area encloses intimate spaces for adult study and children's reading. The architect designed the plywood furnishings. Horizontal ductwork visually carries the ceiling plane into the higher main reading room. North-facing louvers may seem counterintuitive, but they proved to diffuse daylight more pleasingly.

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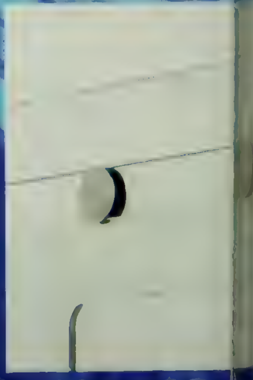

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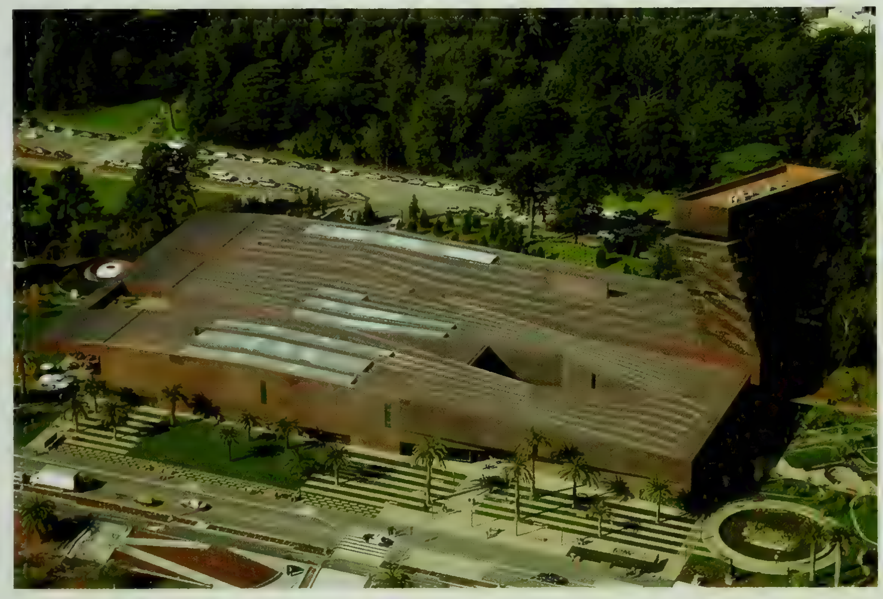
One Project, but Many Seismic Solutions

HE COMPLEX AND CONTEXTUAL DE YOUNG MUSEUM, SET IN SAN FRANCISCO'S LUSH GOLDEN GATE PARK, NCORPORATES AN IMPRESSIVE DIVERSITY OF EARTHQUAKE-RESISTING STRATEGIES

y Joann Gonchar, AIA



Contiguous but separate structures make up the de Young. The galleries occupy a three-story building interwoven with courtyards, and a 144-foot-tall twisting tower houses educational programs.

The designers of San Francisco's de Young Museum, taking their cue from its idyllic setting, have brought the surrounding Golden Gate Park right up to, and practi- lly inside of, the new $202 million building, which ened in October 2005. Its copper sheathing, per- rated and dimpled to mimic the way light filters rough foliage, is already beginning to take on var- d hues. The project's 144-foot-tall tower cants and ists as it rises above the park's tree canopy, provid- g views of the city and San Francisco Bay.

Hidden but no less significant than these ntextual moves by the primary design architect erzog & de Meuron are the project's seismic fea- res. Few buildings incorporate such a diversity of rthquake-resisting strategies. The exhibition aces occupy a base-isolated, three-story structure ade up of three interconnected and roughly par- el "fingers," each a different shape but about 420 t long and 75 feet wide, and separated by nted courtyards. Although the contiguous nine- ry tower sits on a fixed base, its unusual shape quired major earthquake engineering finesse. en the tower's skin demanded its own seismic solution.

It is not difficult to appreciate why seismic engineering played h a prominent role in the design of the de Young, which occupies a site ly 4.7 miles from the San Andreas Fault. It replaces six adjoining build- s constructed on the same site between 1916 and 1955 and closed ce 2000 after suffering damage 11 years earlier in the Loma Prieta Earthquake [RECORD, November 2005, page 107]. The institution's first home, built in 1894 also on the Golden Gate Park site, was significantly damaged in the earthquake of 1906.

The seismically sensitive location and the need to protect the de Young's delicate and eclectic collections prompted the client, the not-for-profit Corporation of the Fine Arts Museums, which served as developer of the project for the city, to require base isolation for the low-rise building housing the galleries. Because these dynamic connections at the base of columns minimize transfer of an earthquake's ground motion to the steel-framed structure above as well as to its contents, the de Young's curators can brace or anchor the artifacts conventionally and have more freedom with temporary exhibitions. "The aim was to reduce the level of floor acceleration so that the art will 'feel' little vibration in an earthquake," says Bret Lizundia, a principal at Rutherford & Chekene, San Francisco, the project's structural engineer.

The use of base isolation not only provided flexibility for the display of art, but also allowed freedom with the design of the superstructure. A directive from the client for as many open spaces as possible resulted in an irregular column grid, trusses as deep as 20 feet, and long clear spans. The longest is more than 90 feet and bears on the back span of a cantilevered plate girder. "I can't point to anything in particular we couldn't have done without base isolation, but we were able to use less expensive and less complicated details," says Lizundia.

CONTINUING EDUCATION

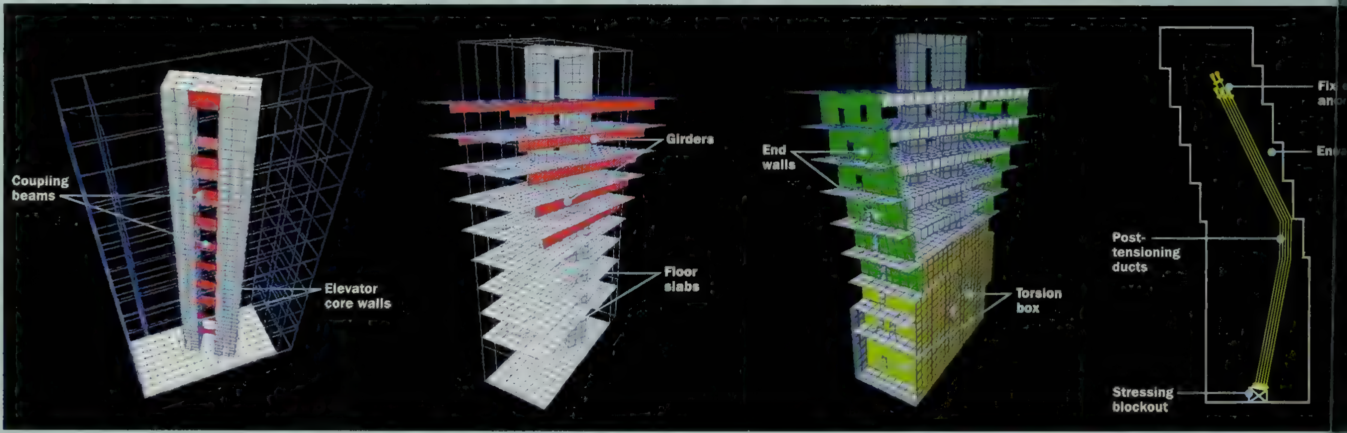
Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ AIA Continuing Education article. To receive credit, turn to page 174 and follow the instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Discuss the earthquake-resisting technologies used in the two structures the museum comprises.*
2. *Describe the components of this project's base-isolation system.*
3. *Explain why base isolation was used for the exhibition spaces.*

this story and more continuing education, as well as links to sources, ite papers, and products, go to **www.archrecord.com**.



The structural engineer used vertical posttensioning (below, far right) to help counteract the potential "bunny hop" effect that could be induced by an earthquake due to the de Young tower's twisting geometry (right). The architects created the tower's shape by rotating each of the upper six floor slabs relative to the one below it. At the same time, the floor plates, which are rectangular at the tower's lower three floors, transform to parallelograms that gradually become more exaggerated near the top of the building.

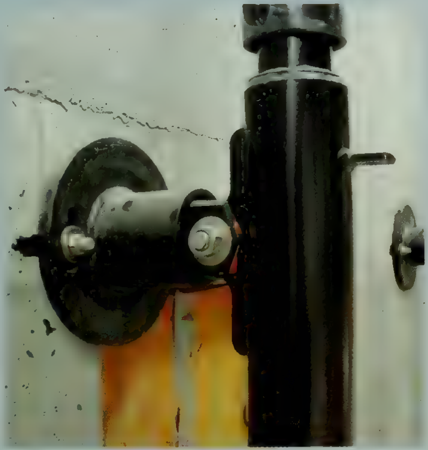
The de Young has a composite isolation system of 76 high-damping rubber bearings and 76 flat sliding bearings. When rubber bearings are pushed in one direction due to the lateral forces of an earthquake, they tend to return to their original position, much like springs. The slider bearings, in contrast, do not have restorative properties. But the inclusion of sliders lengthens the period—the time it takes the building to move from the center to the extreme right to the extreme left and back to center again. The composite system is more effective in reducing acceleration than a system relying on rubber bearings alone, according to the structural engineer.

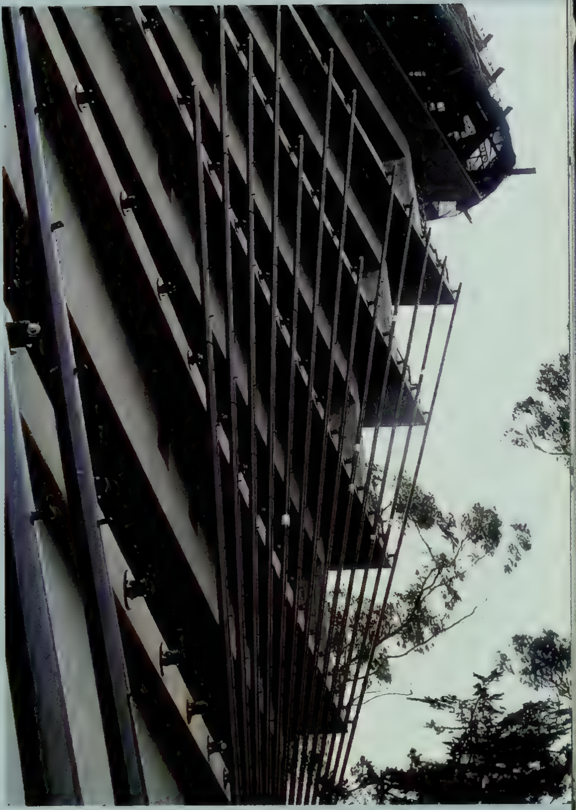
In addition to lateral forces, a temblor may subject the museum to twisting. Areas at the perimeter of the building, and especially the corners farthest from the center of the floor plate, would be likely to experience the largest displacements. To counteract this tendency to rotate, the rubber bearings are positioned under the columns near the edge of the foundation and are also clustered at the east and west ends of the building. The sliding bearings are located under columns at the interior of the foundation plan, where displacement due to rotation is less of a concern. The arrangement "improves the building's torsional resistance," says the structural engineer.

Working in concert with the bearings are 24 fluid viscous dampers, which connect foundation and superstructure. The devices prevent the building from moving too far during certain kinds of quakes, especially near field pulse events, which deliver a jolt.

BASE ISOLATION ALLOWED FLEXIBILITY FOR THE DISPLAY OF ART AND FREEDOM WITH THE DESIGN OF THE STRUCTURE.

A key component of any base-isolation system is its moat, a trenchlike space surrounding the building that allows it to move during an earthquake. At grade, the opening is often protected by a railing or an exposed, stepped cover that can slide back and forth should a temblor strike. However, in the case of the de Young, where a 3-foot-wide moat surrounds the lower building, these typical solutions were deemed too urban and not in keeping with the architects' goal of merging the





Young tower's
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ng panels are
ed to 3-inch-diameter steel pipes set about 5 feet apart (far right). A sleevelike joint that accommodates potential lateral deflection of the building connects pipe sections between every floor. An anchor that permits rotation secures the pipes to the tower structure.

useum with its grounds and Golden Gate Park beyond. "The only tion was to bury the cover in the ground," says Nuno Lopes, associate of n Francisco–based Fong & Chan, the museum's principal architect.

In order to submerge the moat cover without trapping it, the sign team devised a 6-foot-6-inch-wide "pop-up zone" of loosely set vers and planted material placed over a layer of filter fabric. During a ajor temblor, the cover will move back and forth and press on this zone, sulting in a small pile of debris. Although the museum and its contents ould sustain no serious damage, "the impression will be that the [earth- ake] took a heavy toll," says Lopes.

Early in the design of the de Young, engineers decided to use the awl space around the bearings to house many of the building's services d use the adjacent moat area for exhaust. The arrangement keeps the wer structure's copper-clad roof, which Herzog & de Meuron refer to as e museum's "fifth facade," free of the clutter of mechanical equipment d reduces space devoted to ductwork above gallery ceilings.

This double use of the crawl space required careful coordination tween the mechanical and structural teams. To avoid crushing equipment during a seismic event, engineers used the maximum displacement of each bearing and damper to identify a "no-go" space around each element, says San Francisco–based Ray Keane, an associate with Arup, the project's mechanical, electrical, plumbing, and lighting consultant.

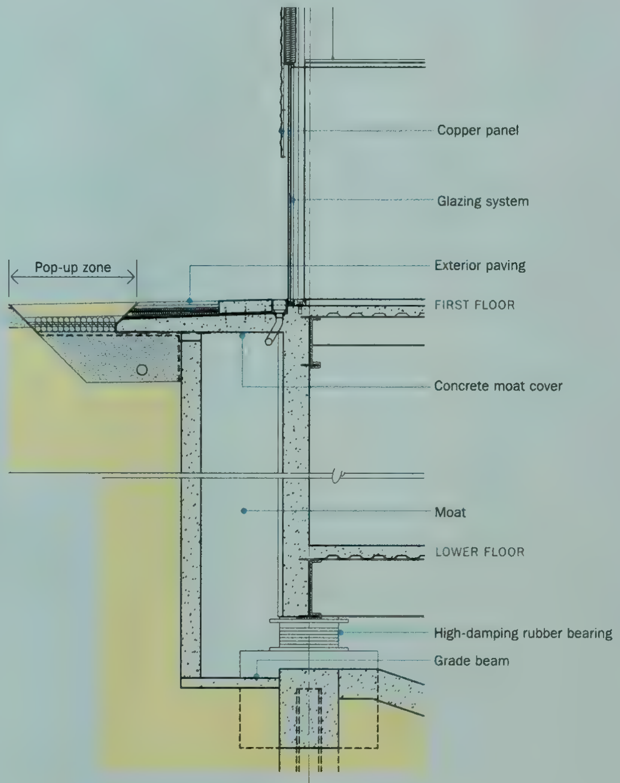
The need for access to these areas for maintenance and service also raised security issues. A building lifted off its foundations and surrounded by an open zone could be vulnerable to intruders, points out David Fong, principal of Fong & Chan. An exhaust grille that can be opened only from the interior was just one of the myriad of details requiring careful scrutiny to safeguard the museum and its artifacts.

Wind is also a worry

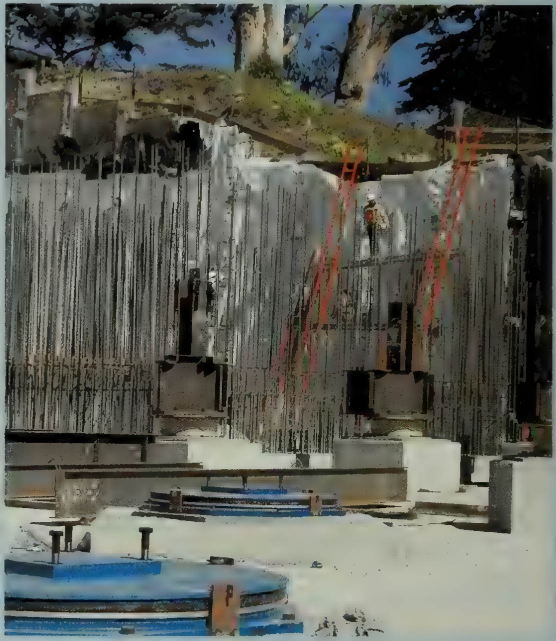
Protruding from the museum's west facade, and sheltering a café below, is a 62-foot-long and 7-foot-deep cantilever, composed of three copper-sheathed "wings" tied together at the outboard edge. Typically, gravity is the dominant design consideration for a cantilever. But at the de Young, seismic and wind forces are more critical.

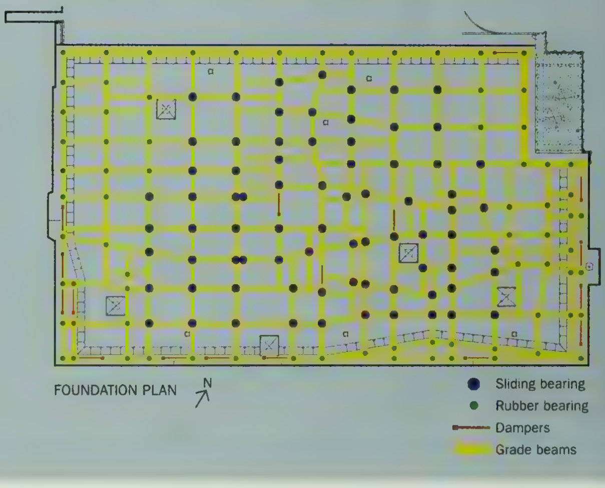
The element was analyzed and designed to avoid the phenome-

Below the de Young's exhibition areas, a base-isolation system (bottom right) combines high-damping rubber bearings, flat sliding bearings (right), fluid viscous dampers, and a 3-foot-wide moat surrounding the structure. To conceal the moat cover and help merge the building and the park, the designers submerged it under loosely set pavers and planted material. In the event of a major quake, the cover will press on this "pop-up zone," creating a small pile of debris.



WALL SECTION





FOUNDATION PLAN

non of resonance, or the matching of its fundamental period with the dominant periods of vibration from seismic or wind forces. Matching the periods could impose "excessive forces and movements," says Lizundia.

To keep the cantilever's fundamental horizontal and vertical periods at about 0.5 seconds, a comfortable margin below the isolated structure's period of 3 seconds and high-energy wind vibrations with periods over 1 second, the element is composed of 10 primary trusses, spaced 24 feet on center. Spanning between these components are Vierendeel cross trusses, about 8 feet 9 inches apart. A hat truss at the cantilever's edge ties the whole together and helps stiffen the structure. In addition, a diagonally placed primary truss defines the northern edge of the center wing and acts like a "super brace," says Lizundia, further stiffening the entire assembly. The resulting cantilever meets the demands imposed by gravity, as well as seismic and wind forces, and satisfies t architects' desire for structure that would be visible through perforatio in the copper skin only as an elegant shadow.

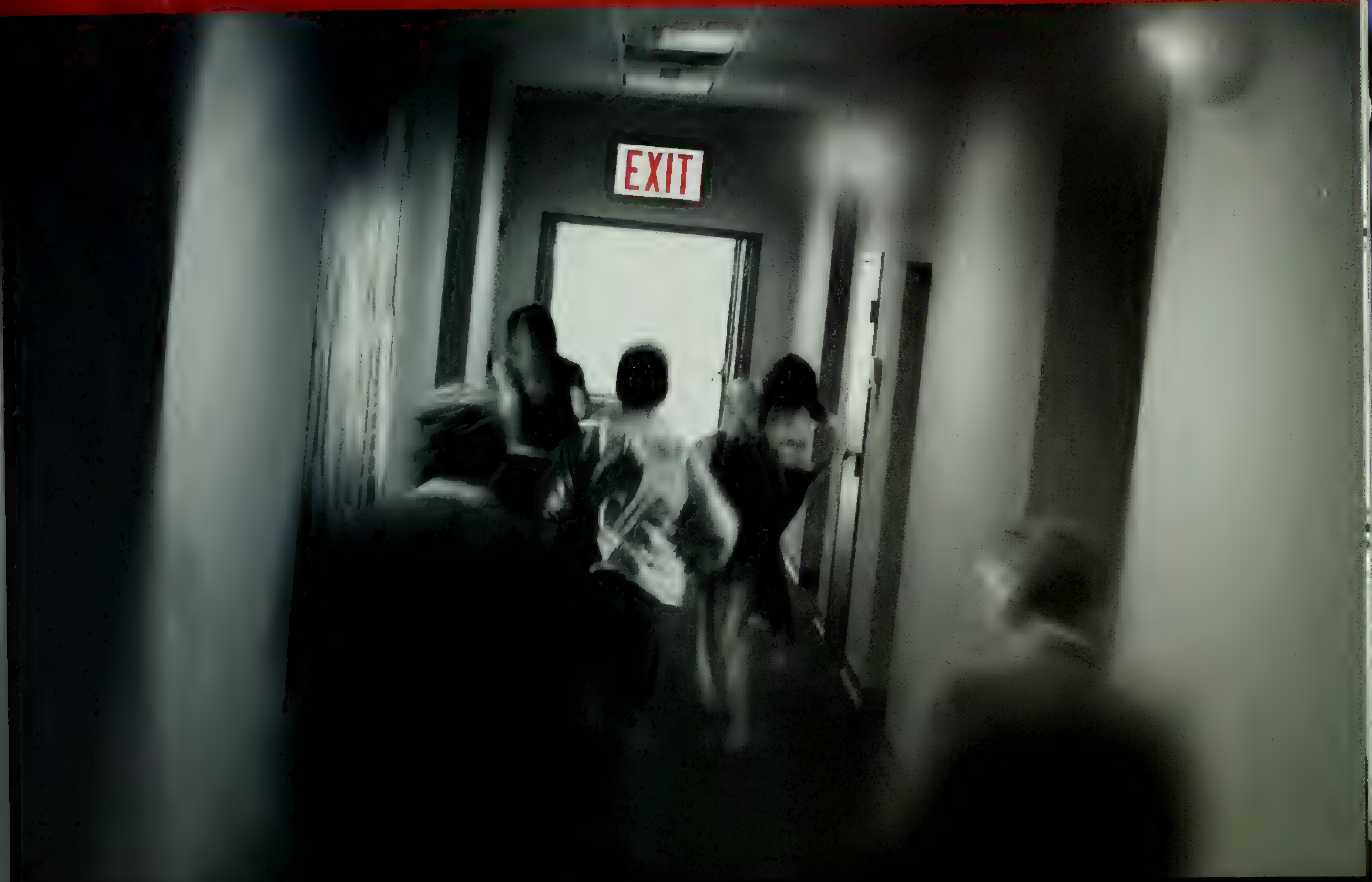
SEISMIC AND WIND FORCES ARE CRITICAL DESIGN CONSIDERATIONS FOR THE DE YOUNG'S 62-FOOT CANTILEVER.

Fixed, but far from simple

Because the de Young's tower houses educational programs rather th exhibitions, the nine-story structure did not require base isolation. Unli the lower gallery building, the reinforced-concrete tower has a fix based. However, it is anything but straightforward.

The tower has a rectangular footprint, roughly 38 by 90 feet, the lower three floors. The upper floor slabs then transform to parallel grams that gradually become more exaggerated as the building rises. the same time, each of the upper six floor slabs rotates relative to the sl below to align with the city's grid beyond, so that the ninth floor's nort east and southwest corners project almost 26 feet from the lower flo corners and seem to hover over the surrounding trees.

The tower has a "coupled shear wall system" composed of tw elevator cores linked by 18-inch-wide and 5-foot-deep beams. The co



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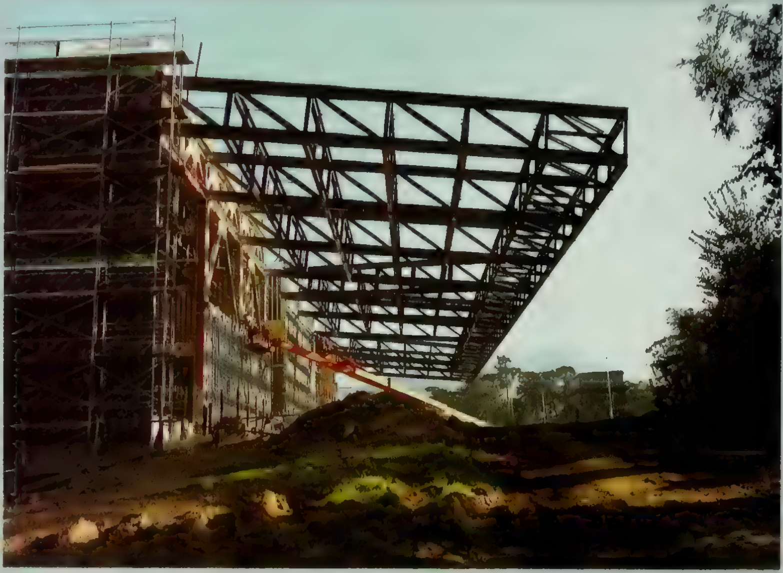
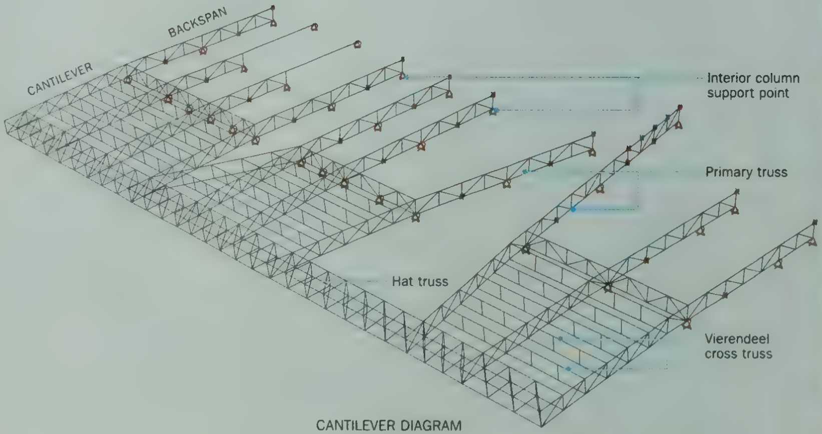


Framing for a 62-foot-long cantilever (during construction, left) is barely visible through perforated copper sheathing (below). It is composed of 10 primary trusses, spaced 24 feet on center. Spanning between these components are Vierendeel cross trusses, set about 8 feet 9 inches apart. A hat truss at the cantilever's edge ties the whole together. A diagonally placed primary truss at one edge of the center "wing" further stiffens the entire assembly.



CANTILEVER DIAGRAM

ponents absorb energy from longitudinal seismic or wind forces. End walls, 20 inches thick, function as both bearing and shear walls, taking forces in the transverse direction. Posttensioned girders support the floor slabs and span between end walls from the fifth floor up. A torsion box, made up of walls at lower floors on four sides, works in both directions.

Its stepping and leaning geometry makes the tower more vulnerable to ratcheting than a building with a more regular shape. The worry is that during a quake, the end walls could move two steps in the direction of tilt but move only one step back, says Lizundia. With the next jolt, it might move two more steps in the same direction and again move only one step back. "There could be more cumulative movement in the direction of lean, resulting in permanent displacement," he warns.

POSTTENSIONING COUNTERACTS THE POTENTIAL "BUNNY HOP" EFFECT DUE TO THE TOWER'S TWISTING SHAPE.

To counteract this potential "bunny hop" effect, the end walls are vertically posttensioned. Ducts embedded in these walls, each contai
ing 12 unbonded tendons under 1,620 kips of force total, "make the tow
'think' it is balanced," says Lizundia. "The gravity overturning moment
balanced by the internal posttensioning-induced moment," he says.

Special skin

The education tower and the base-isolated lower structure are clad wi
more than 7,000 perforated and dimpled copper panels, each unique. T
size and density of the pattern is varied to help limit the amount of nat
ral light allowed into galleries and to camouflage mechanical equipme
To determine the pattern's placement on each panel, the design-bu
supplier of the skin, Zahner Architectural Metal, developed software t
would take into account such factors as where the 1.5-millimeter-th
material could be bent in relation to the voids and puckerings, accord
to Bill Zahner, C.E.O.

The panels, each about 30 inches tall and 12 feet long, fold
interlock. They are attached to the exterior stud walls of the base-i
lated lower structure with continuous stainless-steel clips, but can fl

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in one direction.

The cladding details for the tower are devised to permit even more movement. Because it is not isolated from the ground, the tower required a special solution that would prevent transfer of stress to its sheathing when the structure moves in an earthquake. The tower is "a whole different beast," says Zahner.

The tower's panels can slip relative to one another horizontally and are attached to 3-inch-diameter vertical steel pipes set about 5 feet apart. The pipe sections connect between each floor with a sleevelike joint that accommodates interstory drift, or lateral deflection due to seismic or wind loads. The joint allows the pipes to elongate or shorten as the building moves. The pipes, in turn, are secured to the edges of the tower floor slabs and the lower concrete exterior walls with anchors that permit rotation.

THE TOWER SKIN HAS AN ISOLATION SYSTEM TO PREVENT TRANSFER OF STRESS FROM THE BUILDING FRAME.

The owner's desire for a museum with as many large, column-free spaces as possible resulted in long spans, one more than 90 feet, and trusses as deep as 20 feet.

The objective of the engineering behind the tower's skin system is the same as that of the lower museum building's base-isolation system, explains Steve Huey, principal of Wallace Engineering, the sheathing's Kansas City–based structural engineer. Just as the superstructure of th lower structure is isolated from the its foundation, "the tower's skin isolated from the movement of its frame." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "One Project, but Many Seismic Solutions" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 238).**
- **Fill out and submit the AIA/CES education reporting form (page 238) or download the form at www.archrecord.com to receive one AIA learning unit.**

QUESTIONS

1. Base isolation was used to minimize transfer of an earthquake's ground motion to which?
- **a.** the exhibition structure only
- **b.** the exhibition structure and its contents
- **c.** the tower and the exhibition structure
- **d.** the tower, the exhibition structure, and its contents

2. Which was a result of base isolation?
- **a.** artifacts needed to be anchored unconventionally
- **b.** it allowed the art to "feel" the vibration from an earthquake
- **c.** it allowed more freedom with temporary exhibitions
- **d.** it provided spaces of regular sizes

3. The client's directive to have as many open spaces as possible resulted in all of the following except which?
- **a.** trusses as deep as 20 feet
- **b.** an irregular column grid
- **c.** truss spans of more than 90 feet
- **d.** laminated wood trusses

4. The areas of the floor plate likely to have largest displacements due to rotation during an earthquake would be where?
- **a.** at the corners
- **b.** around the perimeter
- **c.** in the center
- **d.** at the north and south edges

5. The museum's moat cover was submerged under planted material and pavers to accomplish which?
- **a.** minimize transfer of an earthquake's ground motion to the structure
- **b.** increase security
- **c.** merge the building and the landscape
- **d.** maximize transfer of an earthquake's ground motion to the structure

6. A side benefit of having a crawl space around the base-isolation elements and a moat was that they allowed for which?
- **a.** drainage for planting materials
- **b.** storm-water collection
- **c.** security tunnels
- **d.** keeping the roof free of mechanical equipment

7. A 62-foot-long cantilever was designed to resist gravity as well as seismic or wind forces by using which combination of components?
- **a.** primary trusses and cross trusses
- **b.** cross trusses and diagonal trusses
- **c.** hat trusses and primary trusses
- **d.** primary, cross, hat, and diagonal trusses

8. The tower's end walls are vertically posttensioned to prevent which?
- **a.** stepping
- **b.** leaning
- **c.** permanent displacement
- **d.** a torsion box

9. The tower's skin is isolated from the movement of its frame because it has which?
- **a.** exhibition spaces
- **b.** a fixed base
- **c.** vertical posttensioning
- **d.** sleevelike joints

10. The cladding on the de Young Museum and tower is which?
- **a.** perforated and dimpled copper panels
- **b.** copper-colored glass panels
- **c.** copper and aluminum perforated panels
- **d.** dimpled copper-bronze panels

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Lighting

California's stringent energy codes don't hamper creativity in three lighting projects in Los Angeles

BRIEFS

More for Title 24: With rewritten standards that took effect last October, Title 24, Part 6, of the California Code of Regulations has served up significant changes to architectural lighting criteria that supercede guidelines last issued in 2001. Among the biggest revisions are additional requirements for outdoor areas, including four zone types. **The codes now address outdoor energy usage** calculations and controls, and add a section on signage power limits. Compliance also is required for alterations to existing outdoor lighting if replacement amounts to more than 50 percent of the systems. New skylight and daylighting requirements are outlined, as well. To download a copy of the revised Title 24 codes, go to www.energy.ca.gov/title24.

Scientists at the Lighting Research Center (LRC) at Rensselaer Polytechnic Institute in Troy, New York, have taken a significant step forward in understanding how light affects the human body. The scientists developed a model that postulates the mechanisms by which humans process light for the circadian system, the regulator of functions such as body temperature, hormone production, alertness, and sleep patterns. The "circadian phototransduction" model offers a framework for exploring the practical aspects of **architectural lighting and how it can affect human health**. The research will be featured in an upcoming issue of the journal *Brain Research Reviews*. For more information, visit www.lrc.rpi.edu.

Two mountain communities garnered lighting awards in March from the International Dark-Sky Association (IDA). The Village Square shopping complex in Sapphire Valley, North Carolina, with outdoor lighting by Steel Partners, is set amid the Blue Ridge Mountains. Sharing top honors was St. Mary's Medical Center at Galena in the Sierra Nevada Mountains of Reno, Nevada, with exterior illumination by the Syska Hennessy Group. The IDA is a nonprofit educational and research organization founded in 1988 to preserve and **protect the nighttime environment and dark skies through quality outdoor lighting**. The annual awards commend architectural lighting projects that control glare, employ appropriate lighting levels and energy efficiency, minimize obtrusive light, and have the least impact on artificial sky glow. For more information on the winners, go to www.darksky.org.

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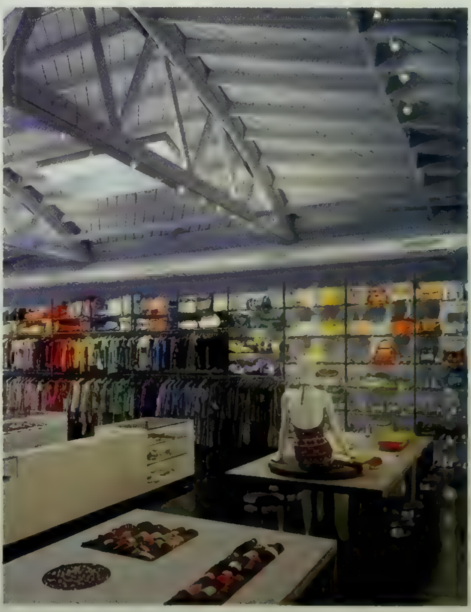
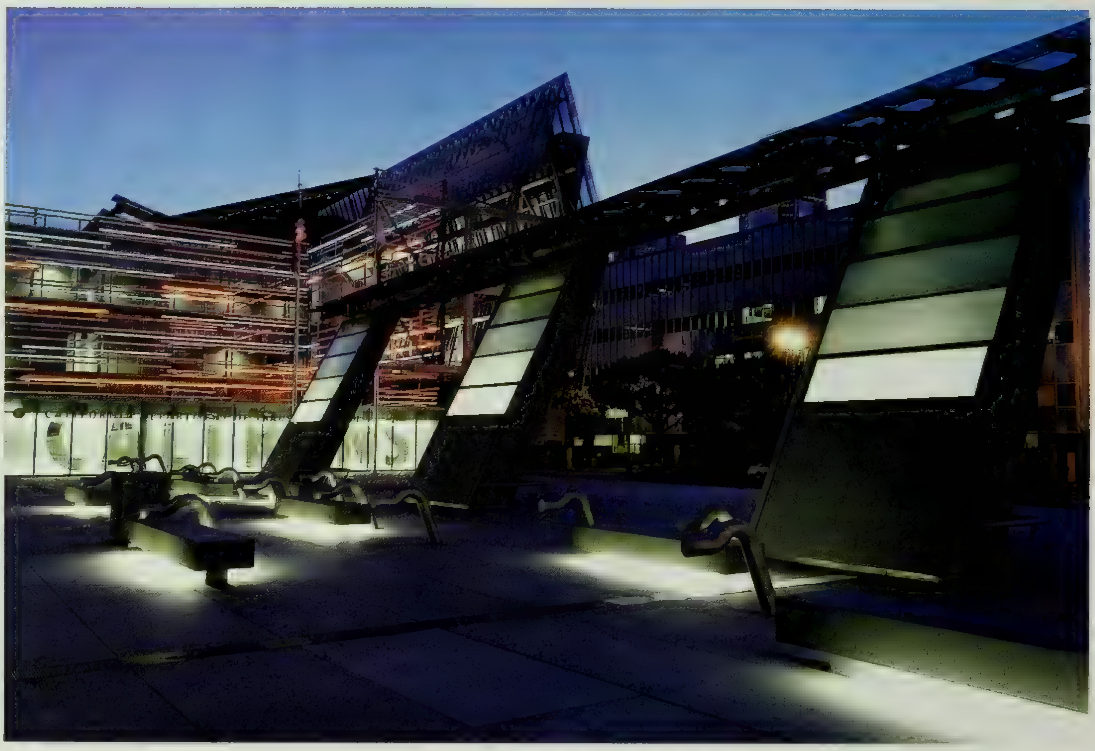
With Title 24 regulating energy usage for newly constructed commercial and residential buildings, California presents architects and lighting designers with some of the most stringent project parameters in the country. But often such challenges inspire ingenuity, with no sacrifice to program or aesthetics, as three lighting projects in the Los Angeles area featured this month illustrate. We revisit the Caltrans Building by Morphosis, to take a closer look at the illumination orchestrated by Horton Lees Brogden Lighting Design. For Warner Bros., Lighting Design Alliance defined architectural planes in a new office complex by HLW. And in West Hollywood, Cooley Monato Studio outfitted two Marc Jacobs shops (below) designed by Stephan Jaklitsch with lighting suited to both luxury and casual goods. Enjoy the tour of these leading lights in L.A. *William Weathersby, Jr.*



Lighting by Horton Lees Brogden reveals the many facets of Morphosis's **Caltrans Building**



By William Weathersby, Jr.

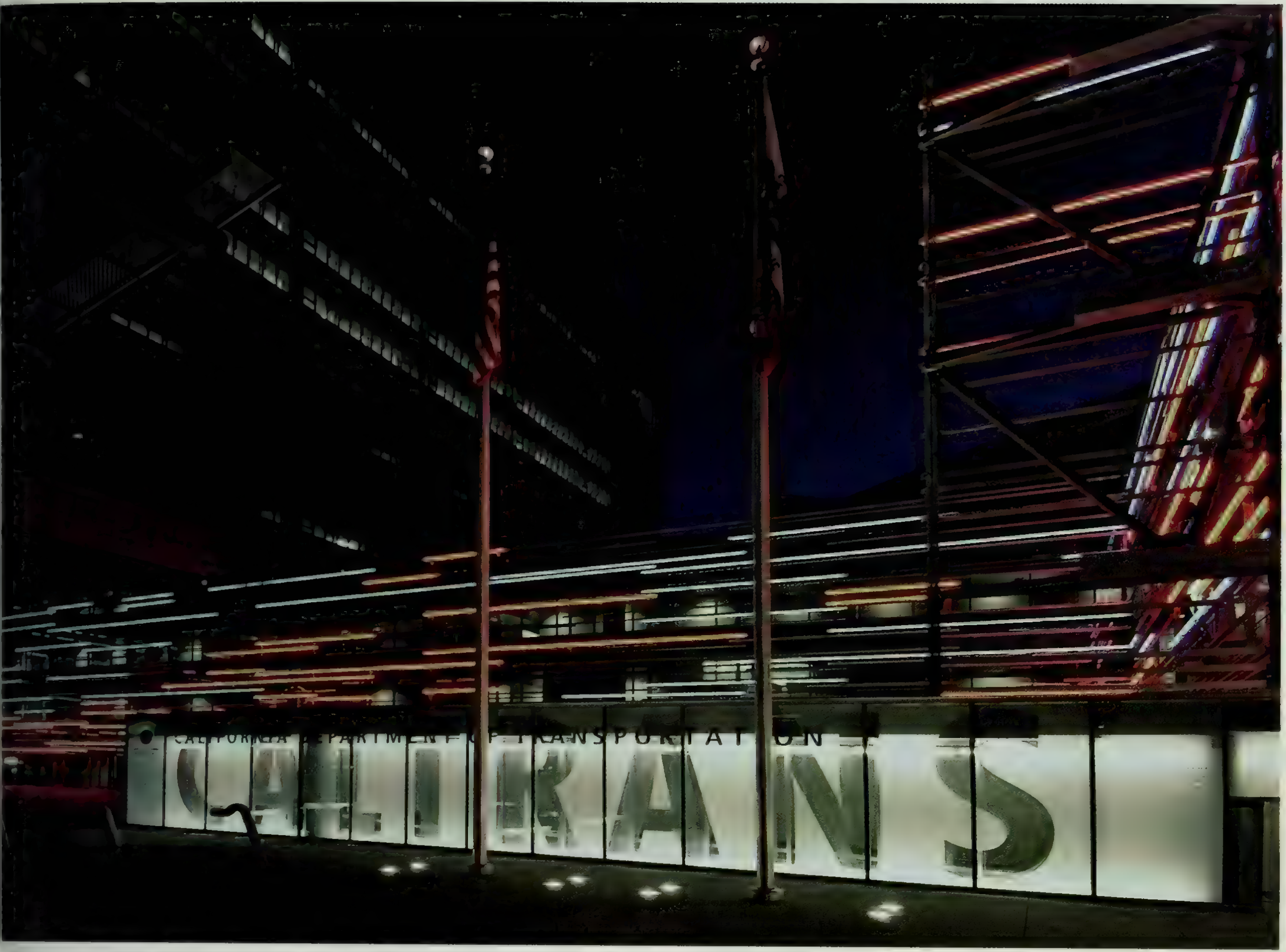
In Los Angeles, the city's car culture has merged with experimental architecture at a building for the state transportation agency. The $170 million California Department of Transportation (Caltrans) District 7 Headquarters Replacement Building serves as a major link in the architectural renaissance of the Civic Center area [RECORD, January 2005, page 120]. Created by a design-build team led by Morphosis, the 1.2-million-square-foot, 13-story building emphasizes sustainable design and energy conservation within an expressive, aluminum-skinned office block. Helping to stay within the spartan construction budget imposed by the state (hard costs barely reached $145 per square foot), architectural illumination by Horten Lees Brogden Lighting Design polishes the building's many facets and brings luminosity to the governmental workplace, all within the state's tight energy-usage codes.

Along its north facade, the Caltrans headquarters employs the first of a number of moving lines of light to make a boldly scaled gesture toward City Hall situated diagonally across the street. Projected below a 7-story block of windows, a horizontal "lightbar" evokes a sense of movement parallel to the street. Simple industrial fluorescents placed behind the architectural element's frosted-glass panels can be accessed for maintenance from an interior catwalk.

The western edge of the "lightbar" protrudes past the building envelope, signaling a four-story outdoor entry plaza around the corner. The complex's L-shaped footprint frames the 328-square-foot plaza, which is wrapped with a kinetic neon installation, *Motordom*, by artist Keith Sonnier. Evoking the streaking taillights of cars moving in traffic, the neon tubes turn on and off in a looped sequence keyed by color to suggest movement. Consulting with Sonnier, the lighting designers ensured that proper ambient light would support security cameras and pedestrian safety while allowing the artwork to take center stage as a compelling icon. "The strategy was to light the plaza without overpowering the public art," says principal lighting designer E. Teal Brogden.

Fluorescent illumination is integrated into architectural elements such as benches, catwalks, and plinths that facilitate garage exhaust. A supergraphic Caltrans sign draws pedestrians toward the entry and provides illumination for a handicapped ramp tucked behind it. Where the internal luminaires are visible through the clear lettering of the sign, perforated metal panels create an added play of light and shadow. Metal-halide downlights tucked into canopy elements border the plaza.

In the main lobby, partitions clad in resin panels hang from the ceiling structure and are internally lit with an array of staggered fluorescent strip lights. The lobby is one of the few locations in the building where an incandescent source was also specified; architectural wall slots



neon sculpture by
tist Keith Sonnier
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and off in sequence,
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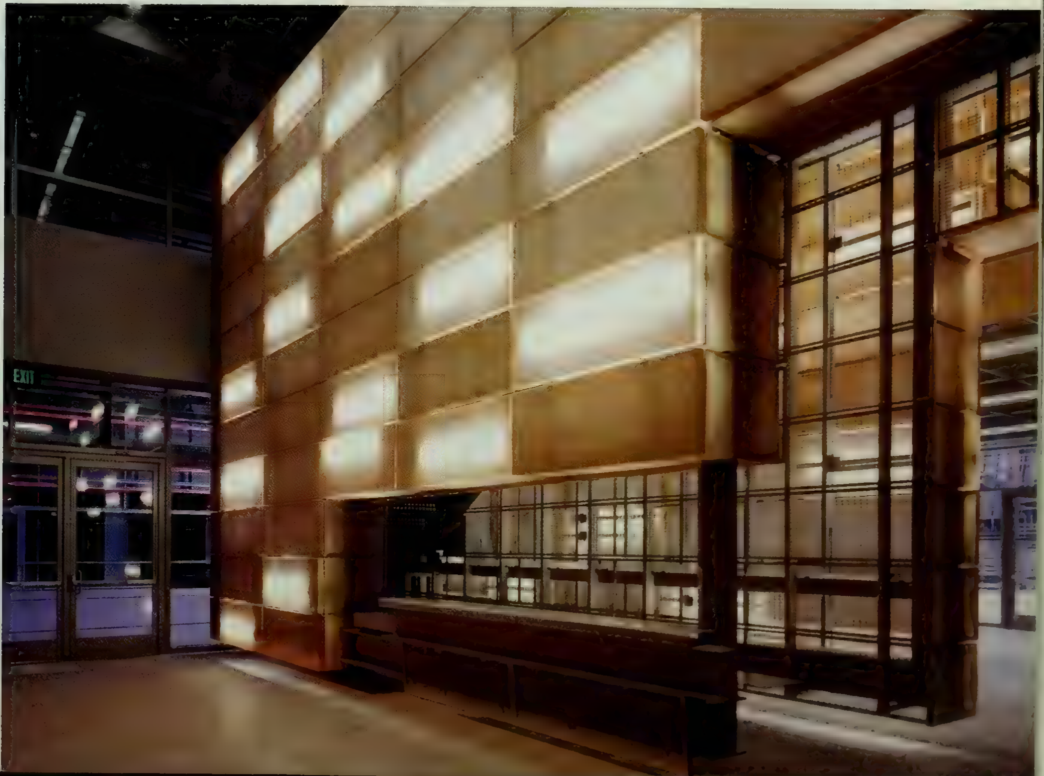
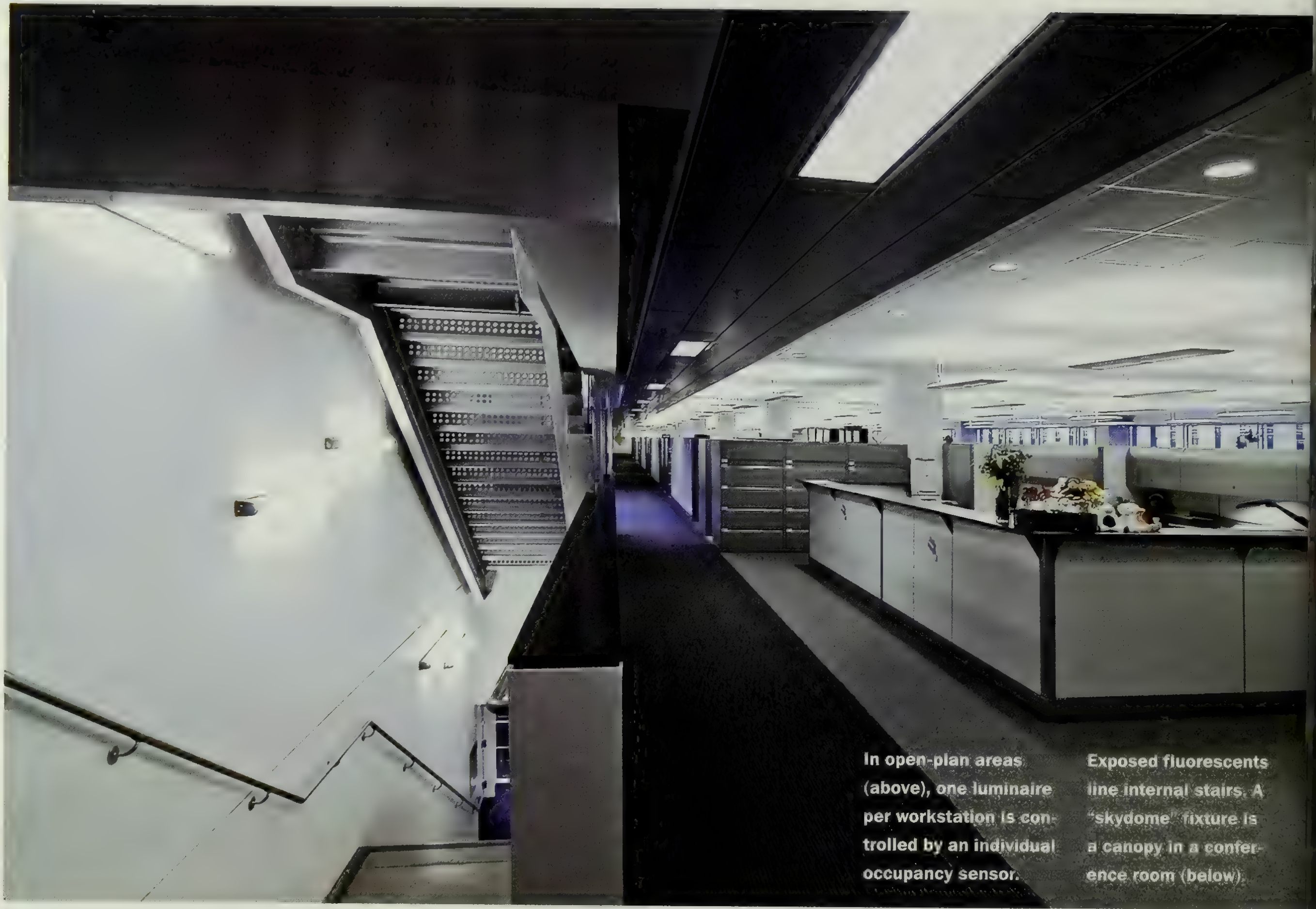
scents backlight
sin-paneled walls.





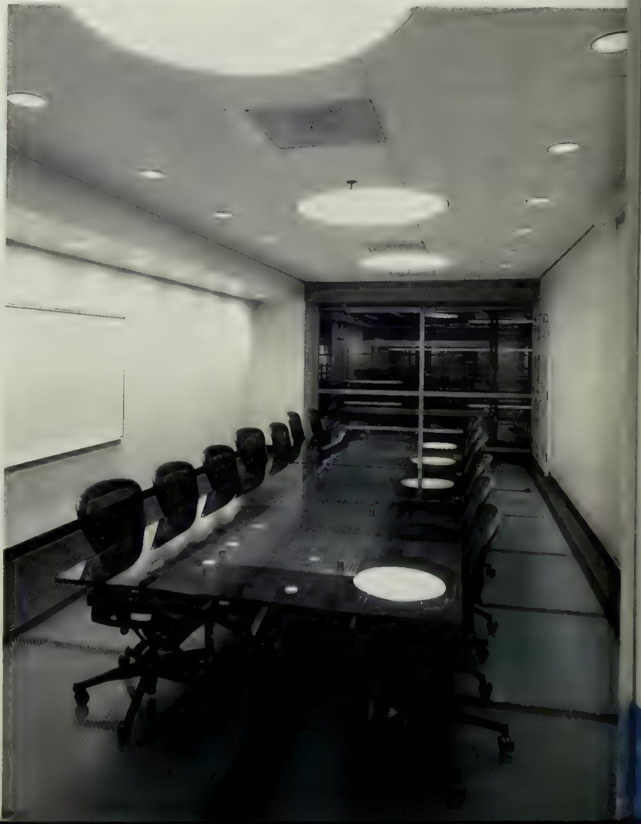
In open-plan areas (above), one luminaire per workstation is controlled by an individual occupancy sensor.

Exposed fluorescents line internal stairs. A "skydome" fixture is a canopy in a conference room (below).

house accent fixtures to highlight artwork on the opposite wall.

Key to the project's aggressive sustainability goals is the concept of one indirect/direct luminaire per workstation. Each worker can control the direct downlight component of the overhead luminaires from his or her workstation while occupancy and daylight sensors continually monitor and adjust the indirect, uplight component. A facilities-management override controls the uplighting during brownout situations. All fixtures feature photo cells to promote lumen maintenance.

More than 90 percent of the project's interior luminaires rely on 4-inch T8 lamps. They are fitted into concave "skylight" luminaires in conference rooms, for example, and also enhance elevator lobbies. Promoting lower energy consumption and higher user satisfaction, Caltrans's lighting helped the project gain a LEED Silver certification. ■



Project: *Caltrans District 7 Building, Los Angeles*
Architect: *Morphosis—Thom Mayne, AIA, principal*
Lighting designer: *Horton Lees Brogden Lighting Design—E. Teal Brogden, principal in charge; Heather Libonati, Emily Koonce*

Sources
Interior ambient lighting: *Ledalite (Ergolite)*
Downlights: *Kurt Versen; Daybrite*
Exterior lighting: *Paramount (Craft Light)*
Neon sculpture: *NSI*
Additional lighting: *Prudential; Focal Point; Paramount (Craft Light)*

For more information on this project, go to Lighting at **www.archrecord.com**.

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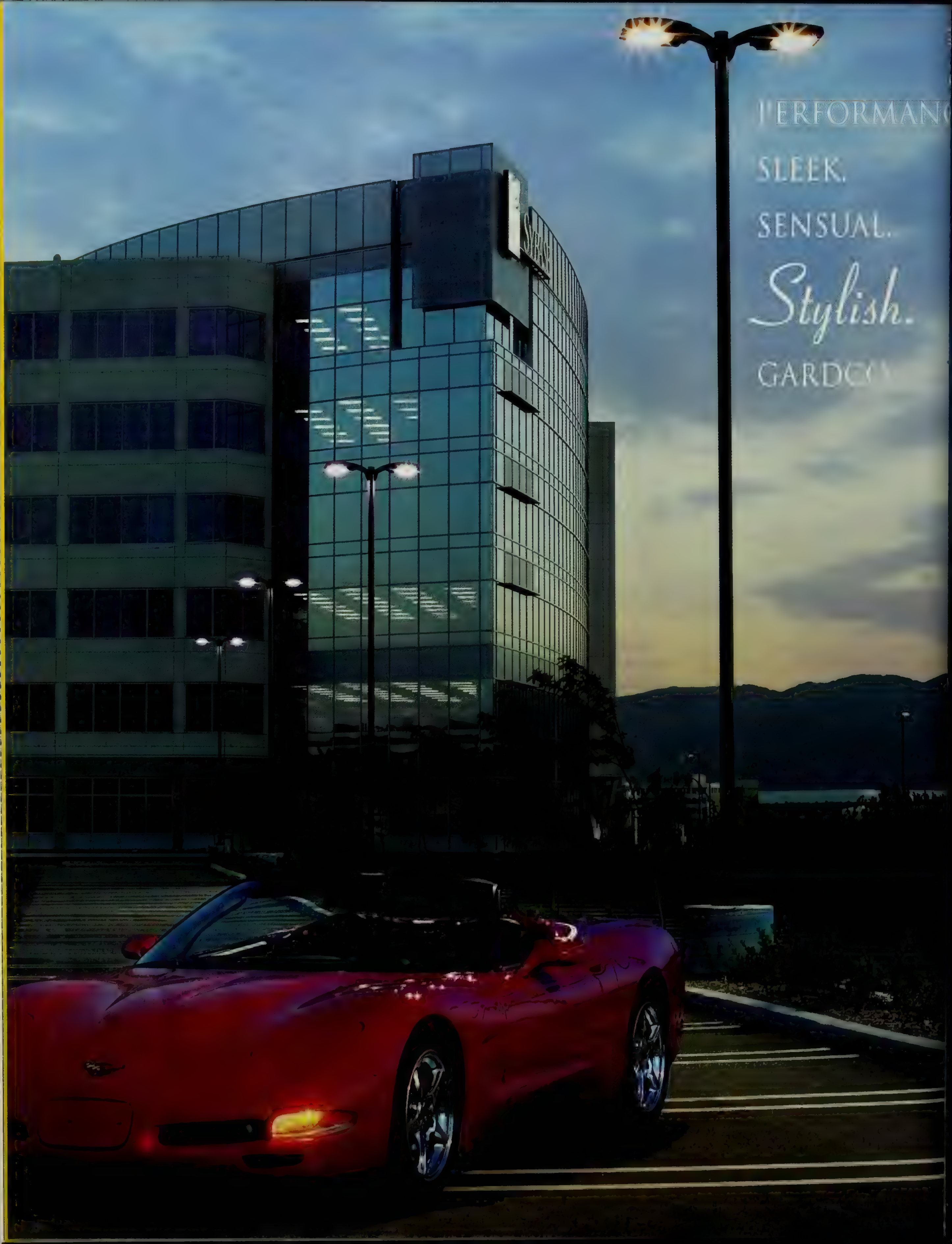
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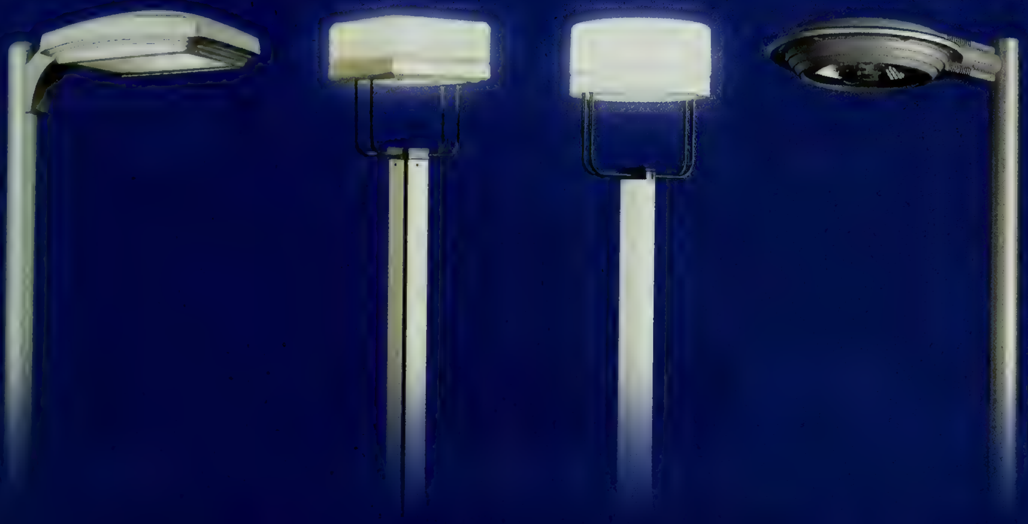

Gardco site luminaires flow from poles, effortlessly, minimally, elegantly. The styling is confident, subtle, satisfying from every vantage. Their illumination is uniform, glare-free, site-specific. From 10' to 40', 50 to 1000 watts, Gardco designs are thoughtfully proportioned for roadways, parking lots and pathways and are the original high performance luminaires.

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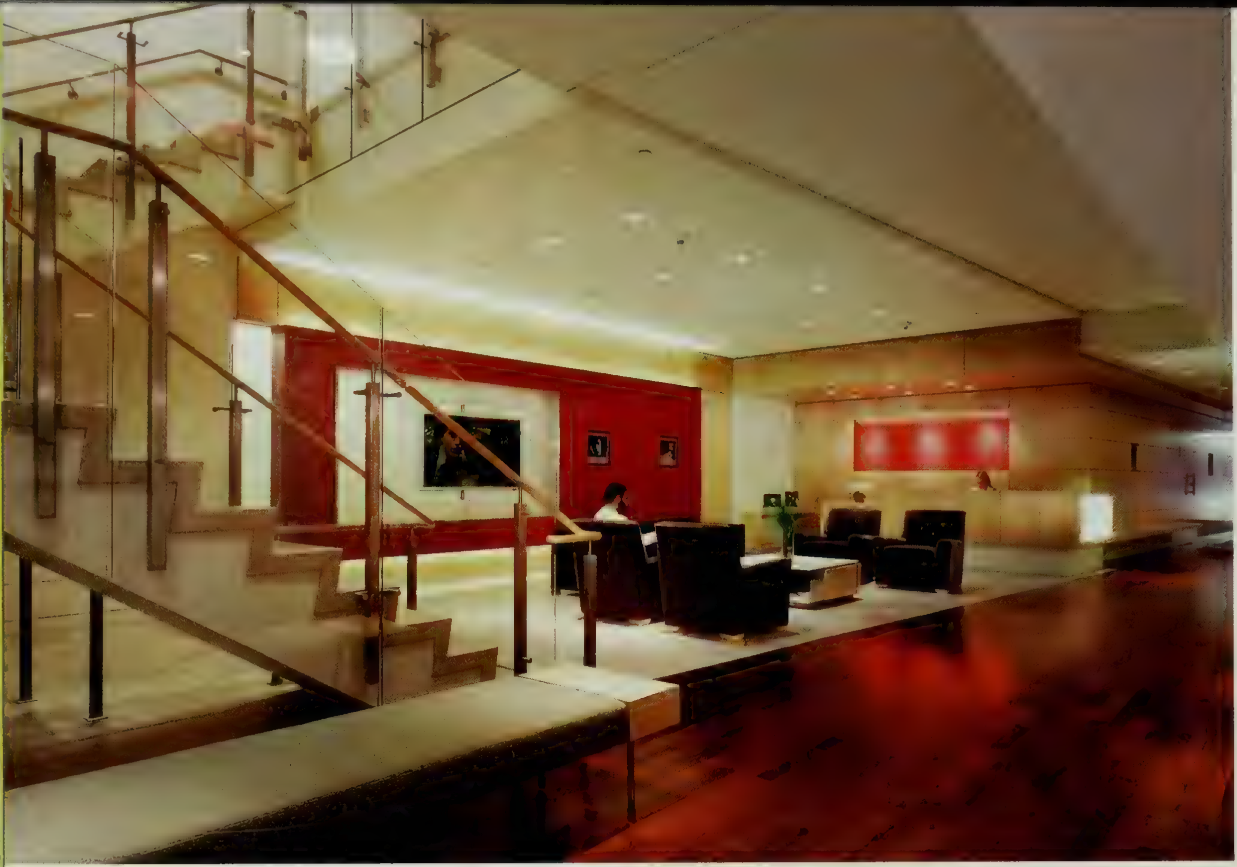
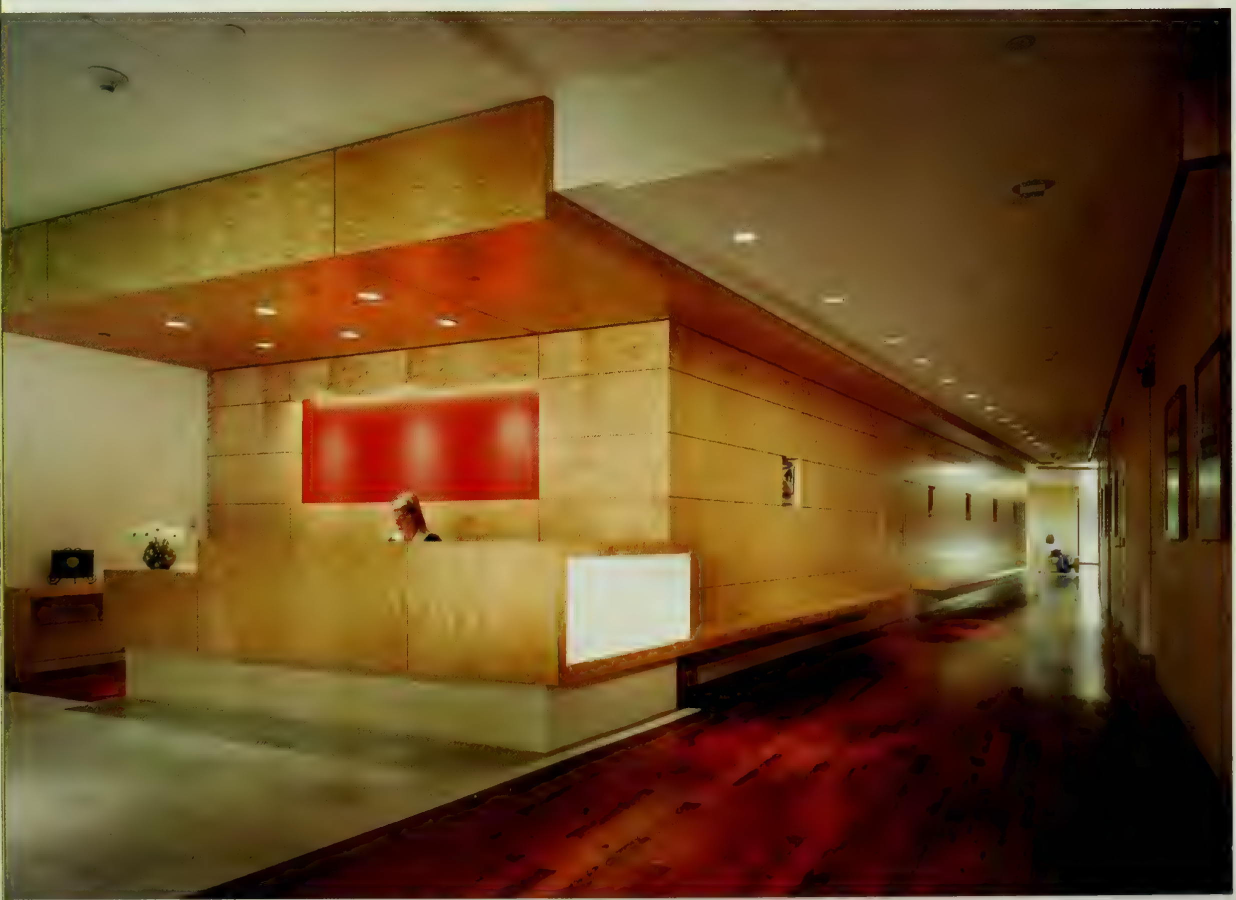




Lighting defines arch
tectural planes in the
reception area for
Warner Home Video
(left and below). A fla
screen monitor fram
by frosted glass is
inset into a red-paint
wall. Cold-cathode fi
tures outline the top
and bottom edges of
the red wall. As a visi
pivot point in a corrid
a structural column i
wrapped with fluores
cent strip lights behi
translucent panels
(opposite, top). Back
horizontal panels
enhance corridors
(opposite, bottom).

ighting Design Alliance accents architectural details at Warner Bros. Studio Plaza in Burbank, California

y **William Weathersby, Jr.**

For longtime client Warner Bros., the Los Angeles office of HLW recently renovated 420,000 square feet of office space in an existing building across the street from the the company's main film and television studio lot in Burbank, California. Consolidating rporate divisions from at least five locations, the renamed Warner Bros. udio Plaza complex includes a new headquarters for Warner Home deo, which occupies approximately 200,000 square feet on multiple ors. "As a leader in the industry, the home video division distributes VDs to clients around the world and wanted to steer away from the ndard corporate look yet maintain a high level of sophistication," says LW partner in charge Shari Jalali. "We created simple geometries with a lored, clean-lined look."

Partially inspired by the work of Piet Mondrian, the interiors compass abstract linear graphics and a color palette built around red d white surfaces complemented by wood finishes. Lighting Design liance enhanced the spaces with integrated architectural illumination. ge and cove lighting gives definition to vertical and horizontal planes, ile providing visual cues that guide circulation throughout each floor.

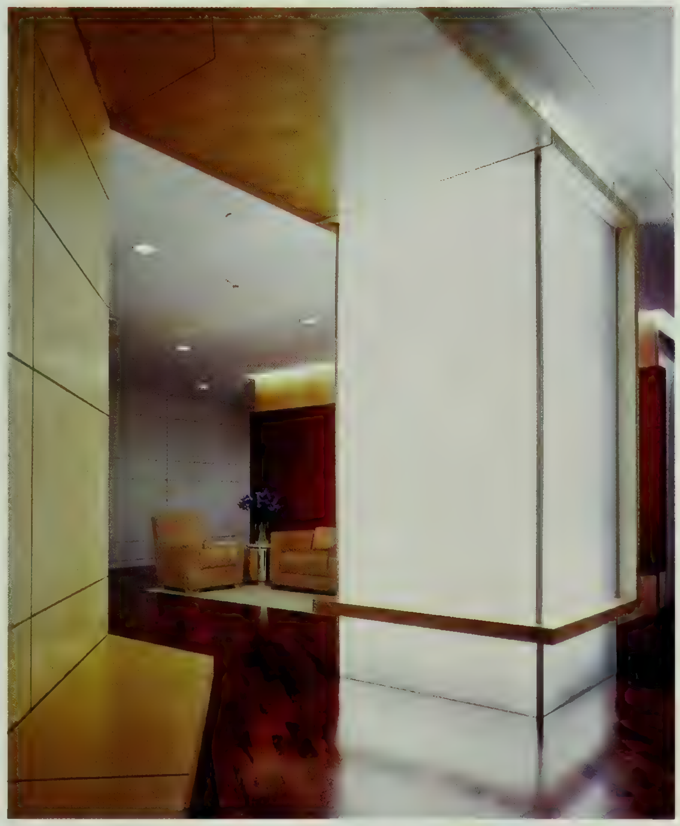
The focal point of the 11th-floor lobby for the home video divin is a recessed feature wall that frames a flat-screen monitor with sted glass. The luminous glass surface is inset into a section of redinted drywall. To make the red wall appear to float out from the surface surrounding paneling of figured sycamore, LDA project lighting signer Andrew Powell lit the top and bottom edges with cold-cathode tures. Reveals at the top and bottom of the sycamore surfaces are also ed with cold cathode, to make each layer of the wall stand out as a ee-dimensional collage.

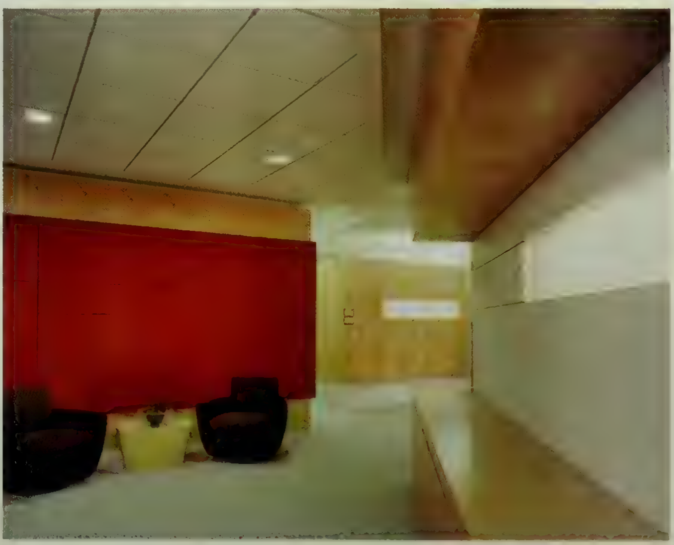
Contrasting with juxtaposed flooring surfaces of cherry and estone, the reception desk and the wall behind it are also surfaced h honey-colored sycamore. Low-voltage xenon strip lights illuminate logo along one wall, while three adjustable MR16 downlights accent desk. A light box at one end of the desk features a translucent panel klit with fluorescents. Light boxes are used throughout the complex add visual appeal. Additional IR, MR16 downlights serve as ambient ting in the reception area, creating an effect similar to the warmth of andescent light.

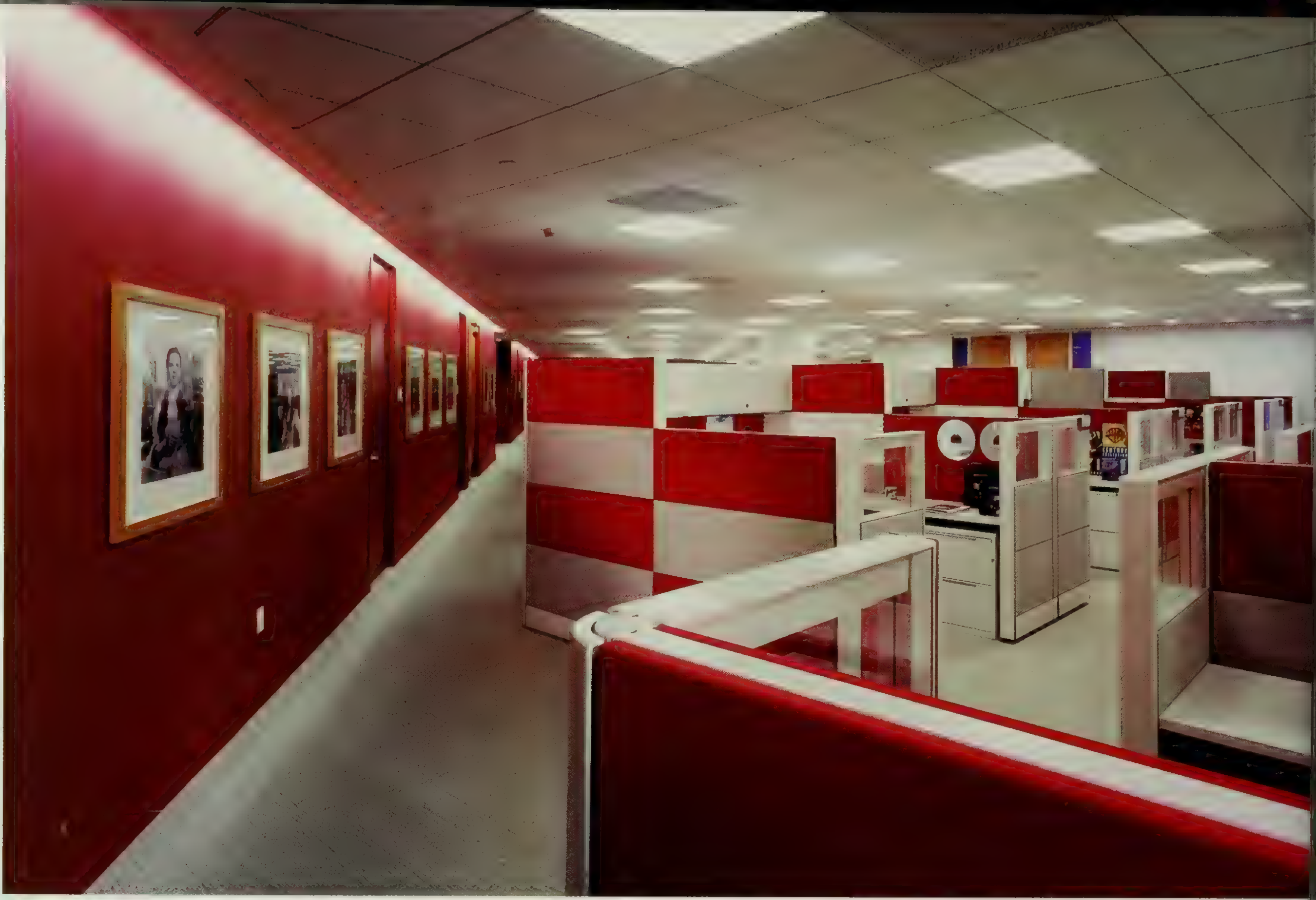
HLW reconfigured an internal staircase connecting floors hin the video division. Limestone stair treads, a stainless-steel and glass ister, and a wood handrail support a streamlined look. Over the staire, 35-watt, PAR20 downlights graze the staircase with ambient light.

In the complex's elevator lobbies, the lighting treatment is kept nple and straightforward" to highlight the barrel-vault ceilings, Powell s. In each elevator lobby, a single, white-painted metal pendant measng approximately 20 feet long houses T5 fluorescents to evenly ight the ceiling.

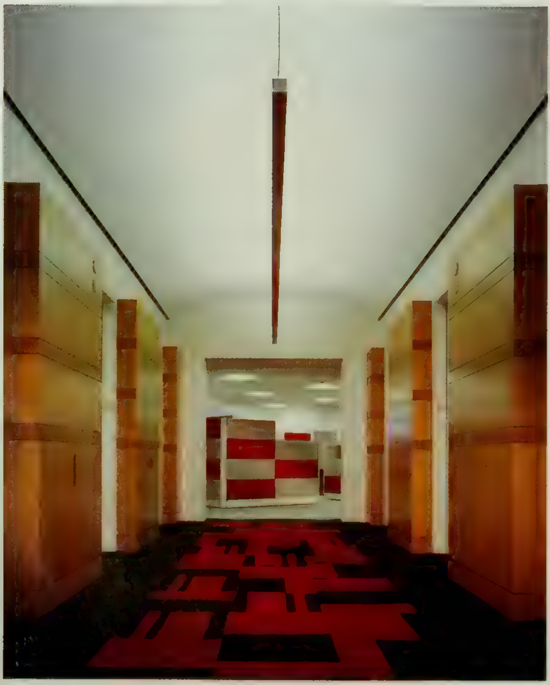
For one pivot point in the circulation route within a Warner me Video floor, the design team wanted to create an iconic glowing







Task lamps are integrated into open-plan systems (above). Additional ceiling-recessed fluorescents provide downlighting. A pendant fixture housing T5 fluorescents uplights the vault in an elevator lobby (below).



column of light. Because the existing column was structural, there w little depth available to accommodate fixtures that would evenly light without revealing the lighting fixtures. "Sometimes what appears to be straightforward effect takes a lot of maneuvering," Powell says. To crea evenly lit planes around the column, the designer worked with fluoresce strip lights and varying layers of diffusion film.

In the open-plan office areas, most of the downlights are con pact fluorescents. Task lighting is integrated into furniture systems, whi ceiling-recessed downlights are fitted with specular louvers that create t feeling of indirect illumination. The walls along the central core of ea open-plan floor are painted red as a backdrop for showcasing frame Warner Bros. Studio images. Ceiling slots along each red wall house co tinuous fluorescents to accent the artwork.

On the ground floor, a multipurpose area combines retail sho and the departure point for the Warner Bros. Studio tour. Lit with MR accent fixtures and fluorescents integrated into custom displays, the spa puts a public face on the corporate office annex where deft illuminati enhances the experience of working in the multimedia dream factory.

Project: *Warner Bros. Studio Plaza, Burbank, California*
Architect: *HLW International—Chari Jalali, partner in charge*
Lighting designer: *Lighting Design Alliance—Andrew Powell*

Sources
Ambient lighting: *Lightolier; Birchwood Lighting*
Downlights: *Kurt Versen; Engineere Lighting Products*
Cold cathode: *California Cathode*
Additional lighting: *Lumetta; Tokistar*
Controls: *Lutron*

For more information on this proje go to Lighting at **www.archrecord.com**.

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Cooley Monato Studio casts a glamorous glow on two **Marc Jacobs** boutiques in Los Angeles

By John Peter Radulski

When launching signature boutiques in major U.S. cities, fashion designers often establish big-tent, flagship stores that survey a full range of goods. Marc Jacobs has traveled a different route, opting instead to open clusters of smaller shops that showcase discrete segments of his retail empire while enhancing the brand image. In Los Angeles, two shops facing each other across Melrose Avenue are variations on a theme, separately showcasing the Marc Jacobs Collection and the more casual Marc by Marc Jacobs line. New York City–based architect Stephan Jaklitsch, who has collaborated on 60 Marc Jacobs locations worldwide, has created chic shopping destinations by rehabbing a former antique shop and a dry cleaners in West Hollywood. Architectural lighting by Cooley Monato Studio "enhances the understated luxury of contemporary California juxtaposed with the glamour of old Hollywood," says principal lighting designer Emily Monato.

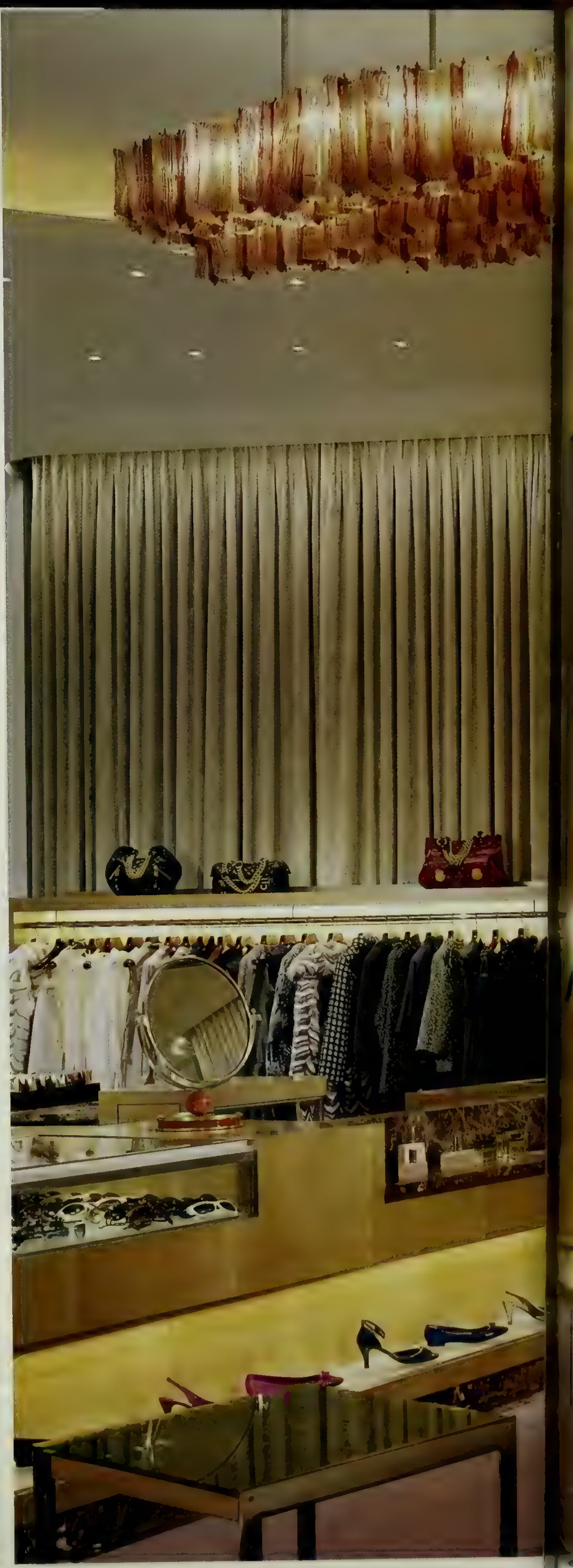
Two Marc Jacobs shops bracket Melrose Avenue (above).

Jaklitsch explains that the 2,300-square-foot, 1960s-era triangular building now housing the Collection boutique was in "a desperate state," requiring about 90 percent reconstruction to meet seismic codes and A.D.A. requirements. Brown-veined marble, lacquered-ebony columns, sycamore paneling, and antique mirrors create a luxurious ambience.

Monato and lighting project designer Jeeyoun Park approached

John Peter Radulski, the former editor in chief of Hospitality Design, *is a writer based in Westport, Conn. He is a frequent contributor to* RECORD.

Project: *Marc Jacobs Shops, Los Angeles*
Architect: *Stephan Jaklitsch Design—Stephan Jaklitsch, principal; Scott Price, Michaeljohn Raftopoulos, project managers*
Architect of record: *Brand + Allen Architects—Chris Harrelson, principal; Peter Cornell, Nicole Long*
Lighting designer: *Cooley Monato Studio—Emily Monato, principal; Jeeyoun Park, designer*
Engineers: *Miklos Lichter & Associates (m/e/p)*



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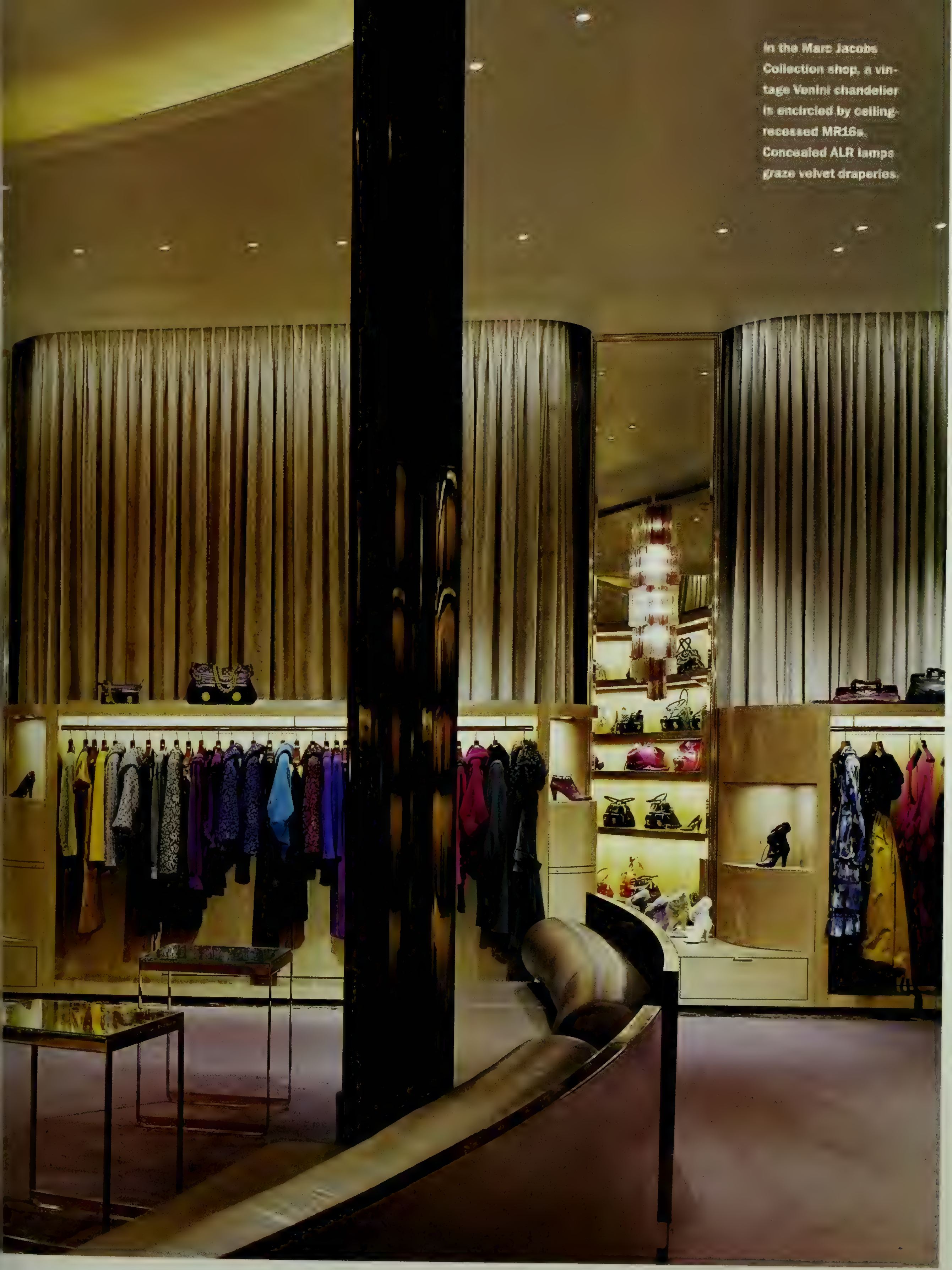
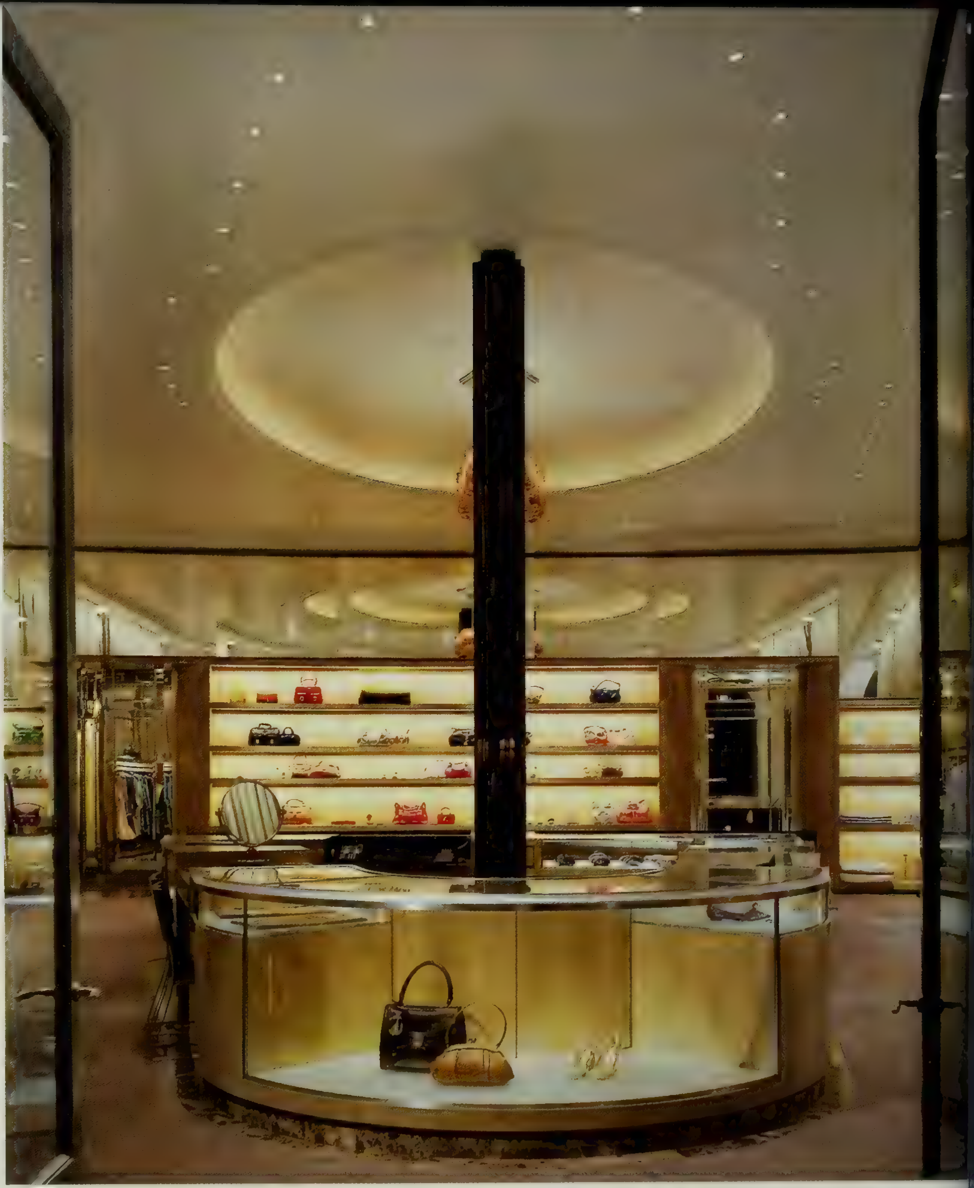


In the Marc Jacobs Collection shop, a vintage Venini chandelier is encircled by ceiling-recessed MR16s. Concealed ALR lamps graze velvet draperies.



Rimmed by a double strand of rope lights, the ceiling's concave, elliptical cove achieves a canopy effect similar to a skylight, which was dropped from the construction budget (right and below). Shallow glass-and-wood shelves showcasing accessories are internally lit by 20- and 28-watt fluorescents.

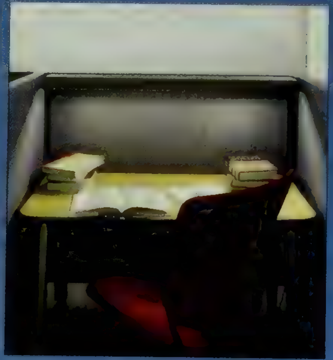
the lighting plan as a balancing act, adhering to the stringent energ usage codes of California Title 24 while providing illumination th complements the architecture and merchandise. They worked with ele trical engineer Miklos Lichter & Associates to determine allowa wattages in display, circulation, and other areas. Then they specified ha gen, incandescent, or fluorescent lamps to keep the project within co

A central, counter-height display and cash-wrap area ancho the Collection interior. Jaklitsch's initial design called for a large skylig which was later eliminated because of budget constraints. To achiev similar canopy effect, a large, slightly concave elliptical cutout is rimm with a double strand of rope lighting. The soft glow of the clean-lin ceiling plane accentuates a vintage 1950s colored-glass chandelier Venini selected by Jaklitsch and Jacobs. Ceiling-recessed, energy-savi IR, MR16, 37-watt lamps accent displays while creating ambient lig

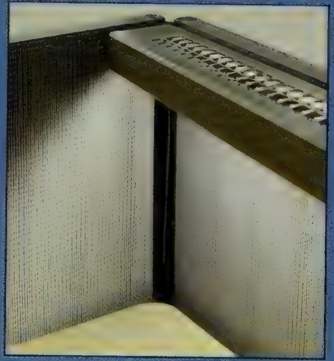
Most of the clothing is presented along the store's perime while glass-and-wood shelves toward the rear showcase handbags a accessories. Park used a mix of 20- and 28-watt fluorescent fixtures these shallow units, fitting lamps into special sockets that can be eas maintained. Custom apparel-display racks designed by Christian Liai sit in front of pewter-colored velvet curtains, which screen floor-to-ceil

more library lighting

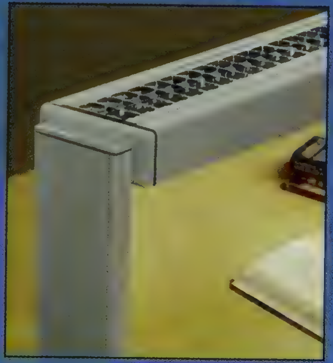
Style 3030



Style 3201



Style 3204



Style 3502

the versatility of library lighting from **elliptipar**

elliptipar's bi-asymmetric 30-30 stack light evenly lights shelves, top to bottom, on both sides of aisles 36"-48" wide. New task ambient luminaires to light study carrels and library tables provide both downlight and uplight from a single source. Style 3502 projects an even wash of light down shelves from heights of 7' or more.

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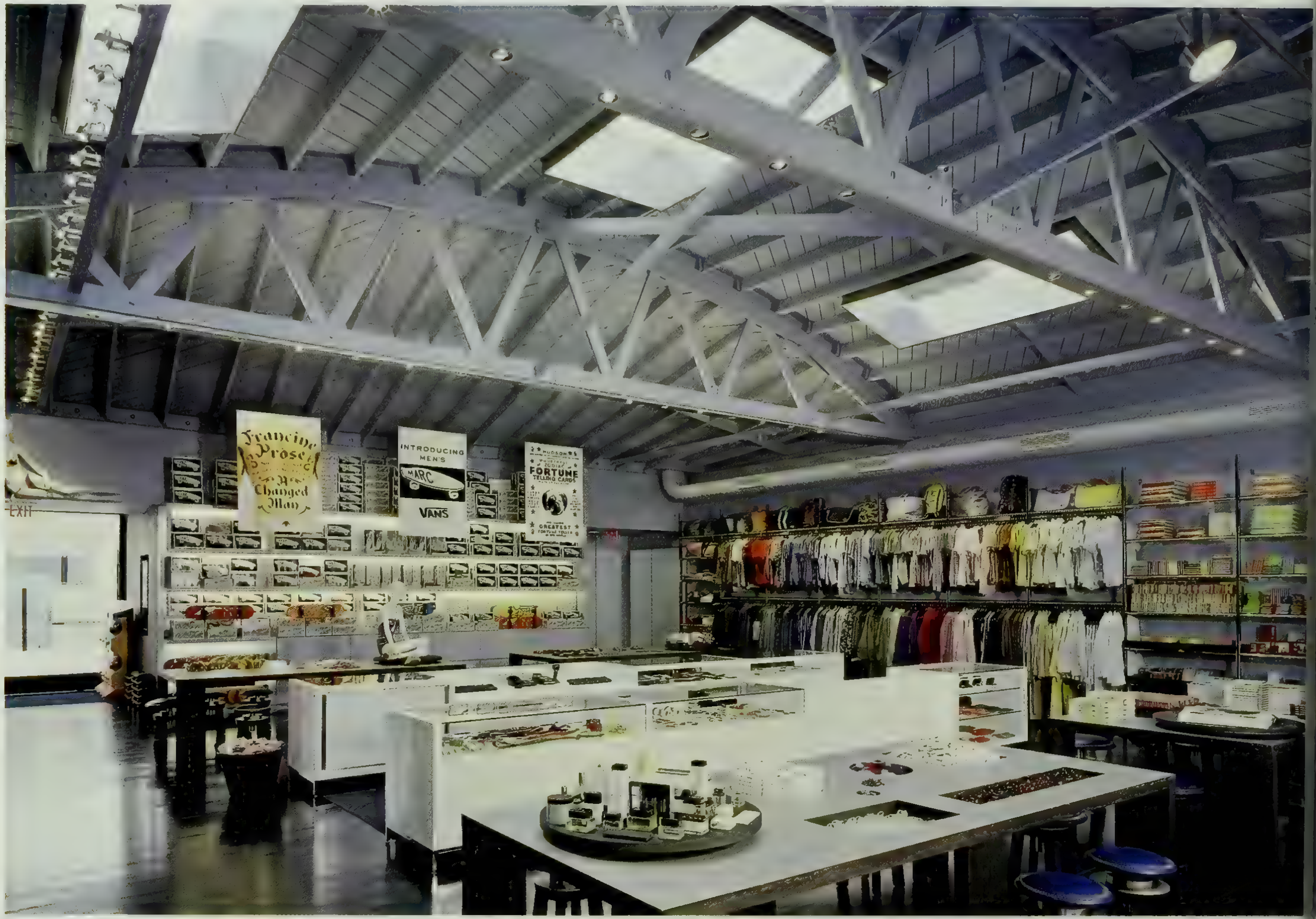

The shop dedicated to the Jacobs casual lines employs a rebuilt wood bow truss to support light fixtures (above). Atop each crossbeam, T5s uplight the ceiling. From their undersides, MR16s illuminate counters and create ambient light. Fluorescents line shelves (below).

display windows facing the street. Pockets within the cove moldi accommodate 20-watt ALR lamps that graze the draperies.

Along the exterior, vintage lanterns frame the entrance, wh grade-level MR16s uplight the ivy-covered facade. Each display windo features a ceiling slot concealing 37-watt MR16s with 25-degree bea spreads. Additional 20-watt, floor-recessed ALRs cast light at a 34-degr angle for a theatrical, fashion-runway effect.

Across the street, the 2,450-square-foot Marc by Marc Jaco store similarly embraces an interior landscape carved from a nondescri space, a former dry cleaners. The original wooden, bow-trussed ceili was rebuilt to maintain an open-air ambience. Fluorescent T5 lam attached to the top of each crossbeam illuminate the ceiling for ambie light. Focused down from the bottom of the crossbeams are MR16 lam with two lighting tracks illuminating merchandise along perimeter wal

Designed as a theater-in-the-round, the streetside window-w staging area required flexible lighting. A track system suspended from t ceiling supports metal halides or halogens, as well as 20 light project on eight dimming zones. The lighting effects here enliven both the colo fully clad mannequins and the high-style shopping district they inhabit

---

Sources

Ambient lighting: *Bartco; Selux*

Downlights: *Litelab; 3G; Lucifer Lighting*

Exterior lighting: *IO; BK Lighting*

Additional lighting: *WAC; Ardee; Fiberstars; Belfer; LSI*

For more information on this proje go to Lighting at **www.archrecord.com**.

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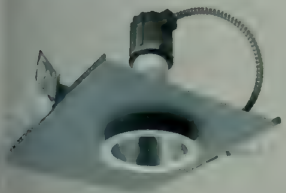

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learn more about Prescolite's new D4 small aperture ownlights, contact your local Hubbell Lighting representative, sit www.prescolite.com, or call 888-PRS-4TEC.

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rchitektūr ARCHITECTURAL DOWNLIGHTS

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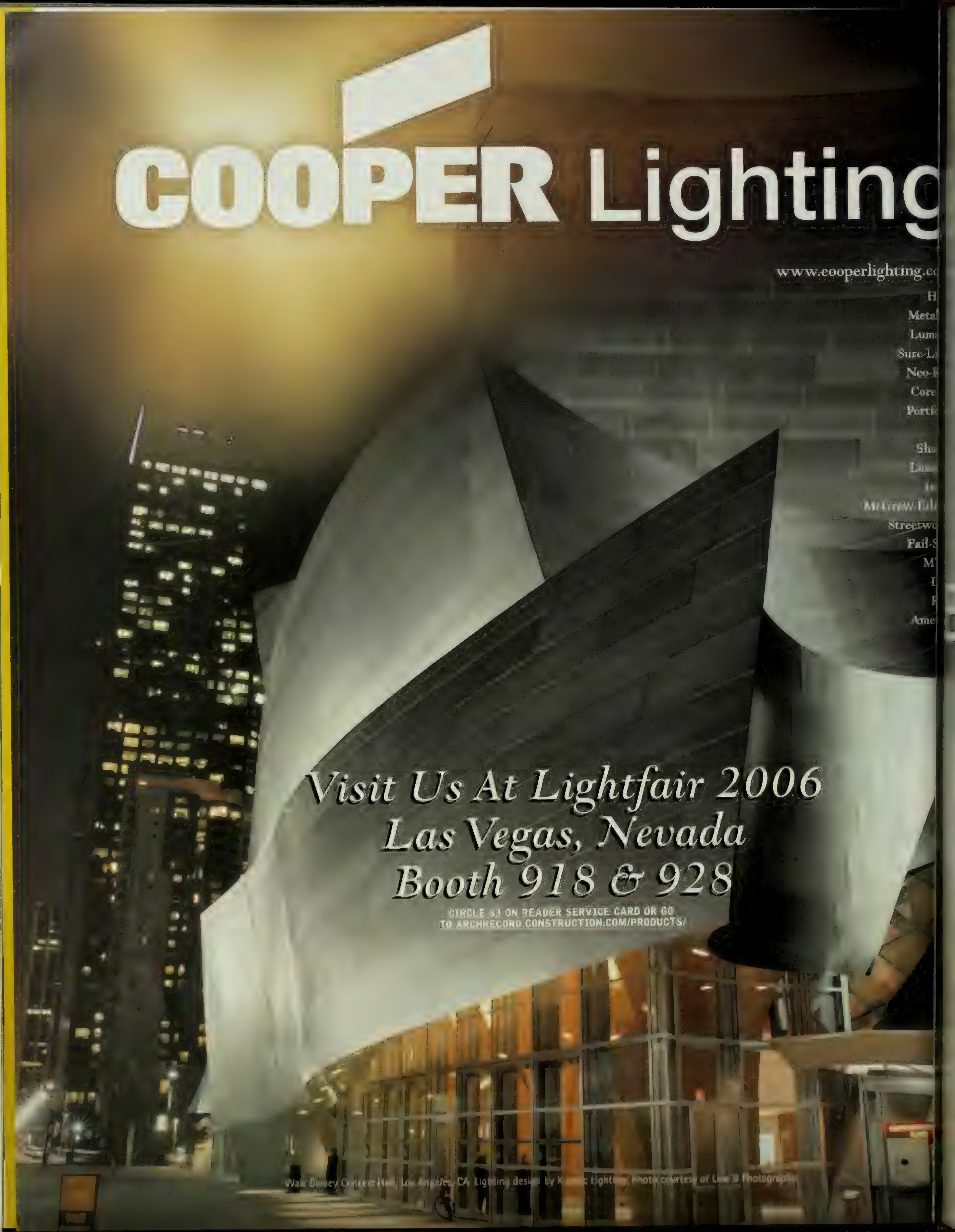
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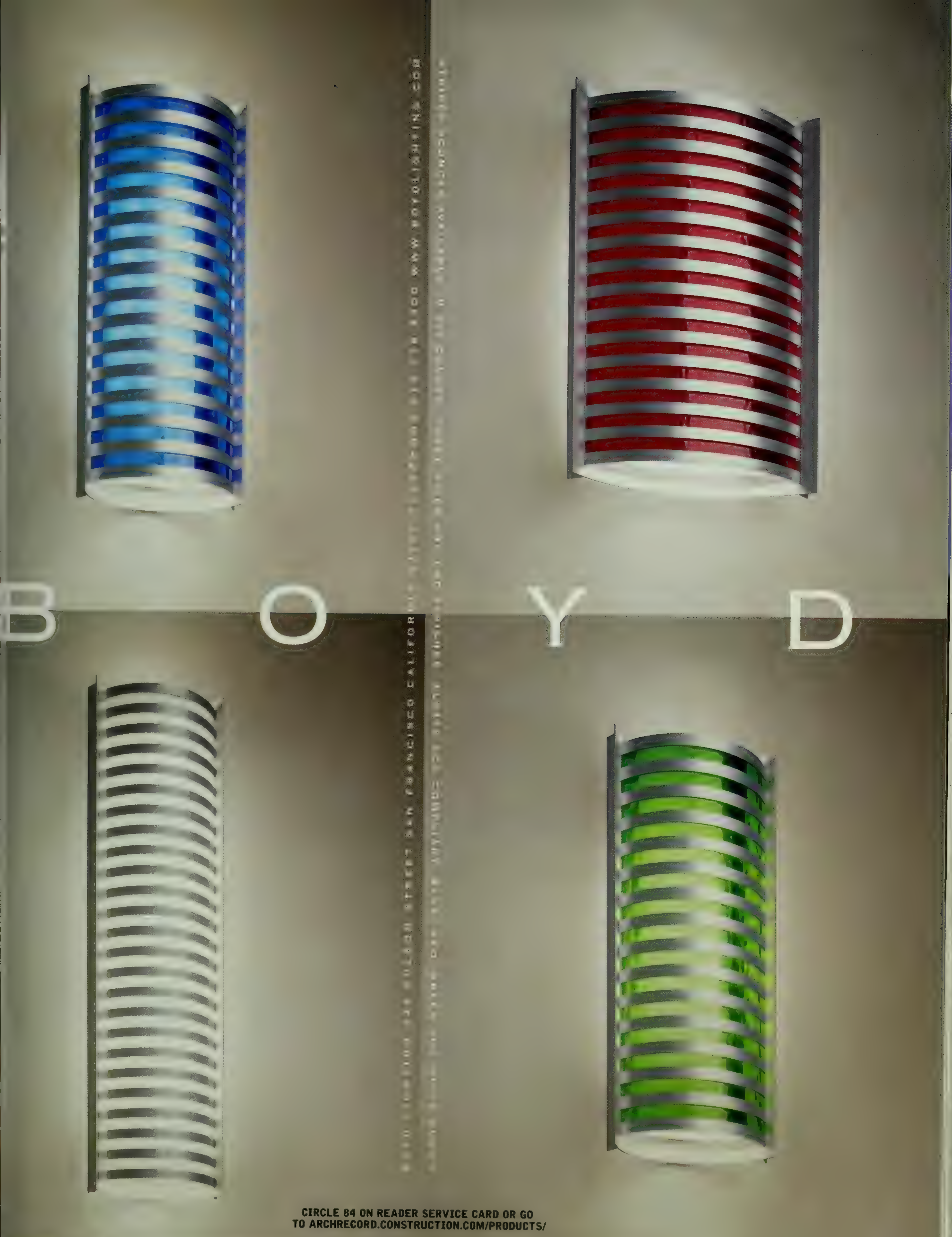
Walt Disney Concert Hall, Los Angeles, CA. Lighting design by [illegible] Lighting. Photo courtesy of [illegible] Photography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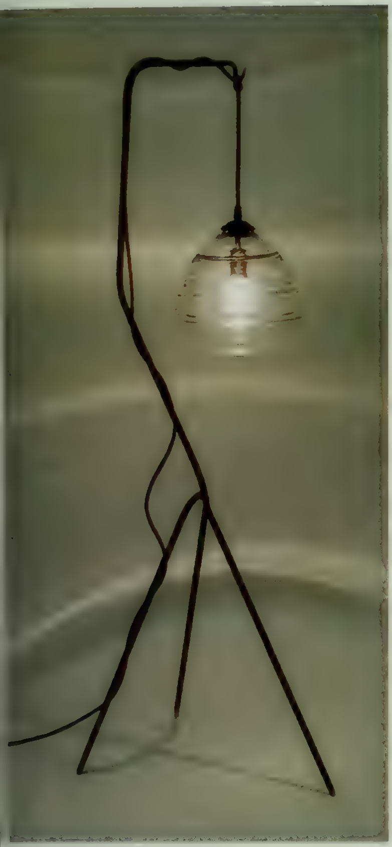

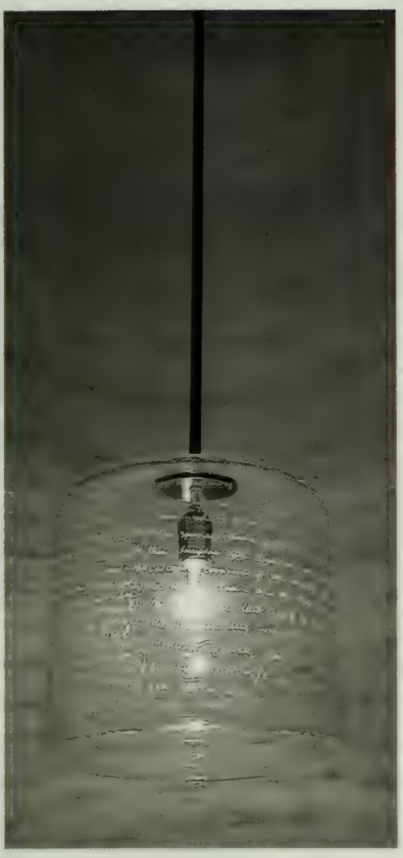

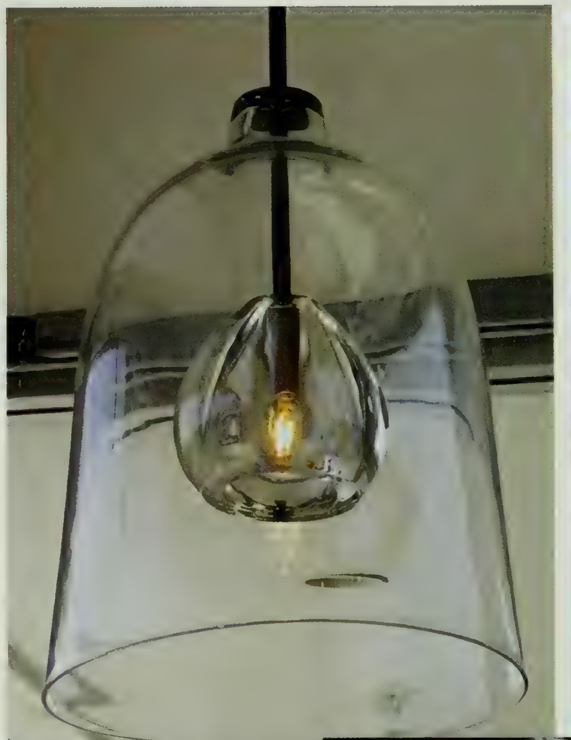

n L.A. artist captures light in glass

erview by Rita Catinella Orrell

Glass artist Alison Berger describes her recent work as “a nice balance between architecture and art.” Berger has not only practiced architecture on both coasts—first with Bausman-Gill and Associates and then briefly h Frank O. Gehry and Associates—but she has more than 25 years of glass-ving experience. During her career she has apprenticed with sculptor Dale huly, worked as a prop maker for films and videos, and become the first erican designer to create a line of glass accessories for Hermès. Inspired by the nan and Victorian eras and “instruments used to calibrate the ephemeral,” designs range from small glass objects to large-scale sculptures, including an ot astrolabe. Berger's handblown crystal glass light fixtures are sold through ly Hunt showrooms nationwide and Plug Lighting in Los Angeles.

HITECTURAL RECORD: *How does living in L.A. inspire your work?*
SON BERGER: There is a really great quality of light. My office, where I do t of designing, is filled with light all day long, which really helps me study glass. I mark time passing as the light moves throughout the studio. t's the advantage of being in Los Angeles—more days are sunny than What also inspires me about being in Los Angeles is access to the zing diversification of manufacturers that are here.

Who are some of your design collaborators in L.A.?
One of my favorite metal fabricators is DEC Fabricators in Cerritos, ornia. They do high-end architectural metalwork, and they are willing to do one-offs and to really work with me on commissions and limited runs, which is always a challenge with manufacturers who want to run it at 500. What I find in Los Angeles is they are a lot more accessible when you show up at their door. They are willing to get excited and involved with something that's a limited run.

AR: The Roman Ring floor lamp (above left) is based on a 5th-century glass-blowing technique. How do you research your glassmaking methods?
AB: I have these art books from old museum collections, and I look at the picture and try to figure it out. There is no one around I can turn to and ask “how did they do that?,” so there is a lot of guesswork involved. And sometimes surprises come that I wasn't going for, that are a lot more interesting than I had hoped.

AR: What do you find most appealing about handmade glass objects?
AB: You get this beautiful quality, like the mark of the tool, small imperfections, and striations or bubbles—like when you go to the flea market and see a beautiful glass. That's the “capture” and quality I try to maintain in producing works now. The best compliment I get is when people come to the studio and ask what flea market I got the pieces at. And I go, “Okay, great!” ■

Top left to right: The Roman Ring floor lamp is available exclusively at Holly Hunt; the limited-edition Word Pendant is available through Holly Hunt and Plug Lighting; and the Bell Light pendant is sold exclusively through Plug Lighting.

Designing for a Sustainable Future...

AAL's indirect product line added a sibling, the 'Straight Fixed Head'. The Dark-Sky Friendly luminaire produces soft, glare-free illumination making it a perfect match for applications where mood is just as important as illumination. The 'Straight Fixed Head' model is available for post and wall mount configurations and can be styled with a round or square upper reflector to complement architectural themes. The Indirect product family utilizes energy efficient lamp sources up to 150 watts and Egress (emergency) options may be added for enhancing public safety.

For product information, log onto: ww.aal.net/indirect_sfh.html

Architectural Area Lighting

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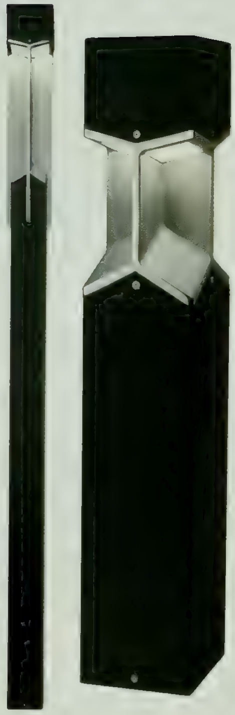
Lighting Products

◄ LEDing the way

Deltalight introduces more than 50 new Power LED luminaires, including a range of surface-mount and recessed fixtures for interior and exterior applications. The line includes task, accent, miniature downlight, wall-sconce, in-ground, linear, and landscape luminaires. Power LED luminaires from Deltalight are available in warm and cool white temperatures. The low-voltage aspect of Power LEDs allows for greater installation flexibility, and they do not require running line voltage connections between the power supply and the light source. Deltalight, Fort Lauderdale. www.deltalight.com **CIRCLE 201**



◄ Protecting us all night long

The new Knight family line from Forms+Surfaces includes the Knight bollard, Knight pedestrian lighting, Knight Bench, and Knight Litter receptacle. The head casting of the pedestrian lighting (far left) features a light source positioned above four quadrants for a symmetrical lighting pattern. One or more of the four frosted-borosilicate-glass lenses may be replaced with opaque shields to create asymmetrical lighting distribution. The matching bollard (near left) is 43" high but can be custom ordered down to a minimum of 33". It features a similar lighting system as the pedestrian lights, and both come in a durable black, slate, or silver powder coat. Forms+Surfaces, Carpinteria, Calif. www.forms-surfaces.com **CIRCLE 202**

ll-weather luminaires

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nterior spaces, Boyd Lighting intro-
es its first collection of exterior
ing fixtures. The Lantern Series fix-
s are UL-listed for wet locations such
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y doors. The hand-crafted lanterns
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m and come in pendant, pier/post
nt, and arm-mounted wall-sconce
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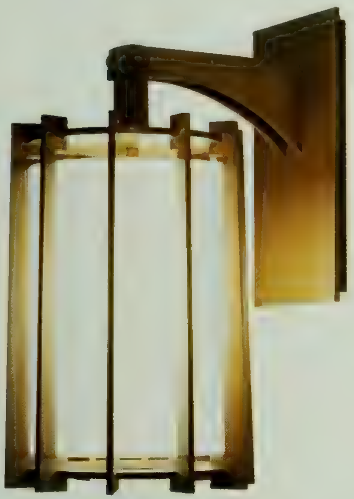
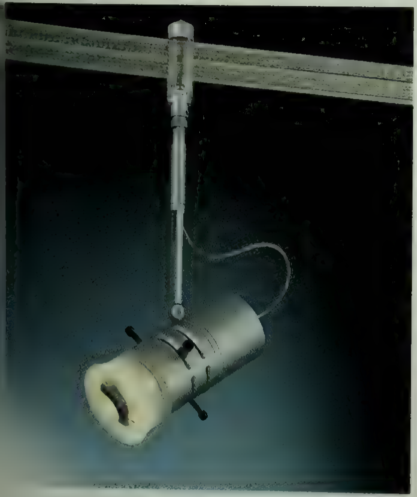
ications ranging from Arts & Crafts
sian-inspired to transitional environ-
ts. Boyd Lighting, San Francisco.
.boydlighting.com **CIRCLE 203**



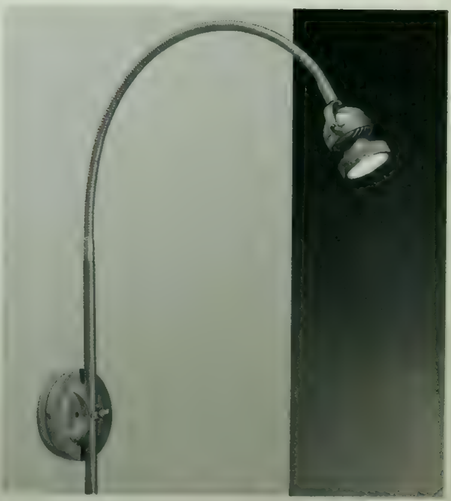
► Fire-resistant downlight

UL-listed electrically, and UL-classified for fire resistance, FireTight meets the stringent electrical installation requirements for a fire-rated ceiling, and due to its inherent fire-resistant design, has been proven to maintain a ceiling's fire rating. While FireTight installs like any other recessed downlight and is available in several apertures in line voltage, low voltage, and compact fluorescent, it is built with additional components to allow it to withstand the extreme temperatures generated by a fire. Prescolite, Spartanburg, S.C. www.prescolite.com **CIRCLE 204**



◄► Hot spotlights

The Apollos Contour (left) is one of the new fixtures and pendants introduced in the new Apollos line by Bruck. The fixture features shutters and a glass lens for variable projections of rectangular or square light. Apollos Contour spot includes a high-polish reflector for increased illumination in a die-cast aluminum housing with a natural silicon diffuser. The Ledra Plug-in Flex (right) is an individual LED fixture in matte chrome that features a flexible arm and an on/off switch. Ledra Plug-in Flex can be surface-mounted on any wall or backboard, and all Ledra fixtures use one 3-watt LED that produces 65 lumens and maintains 70 percent lumen output after 50,000 hours of use. Bruck Lighting Systems, Tustin, Calif. www.brucklightingsystems.com **CIRCLE 205**



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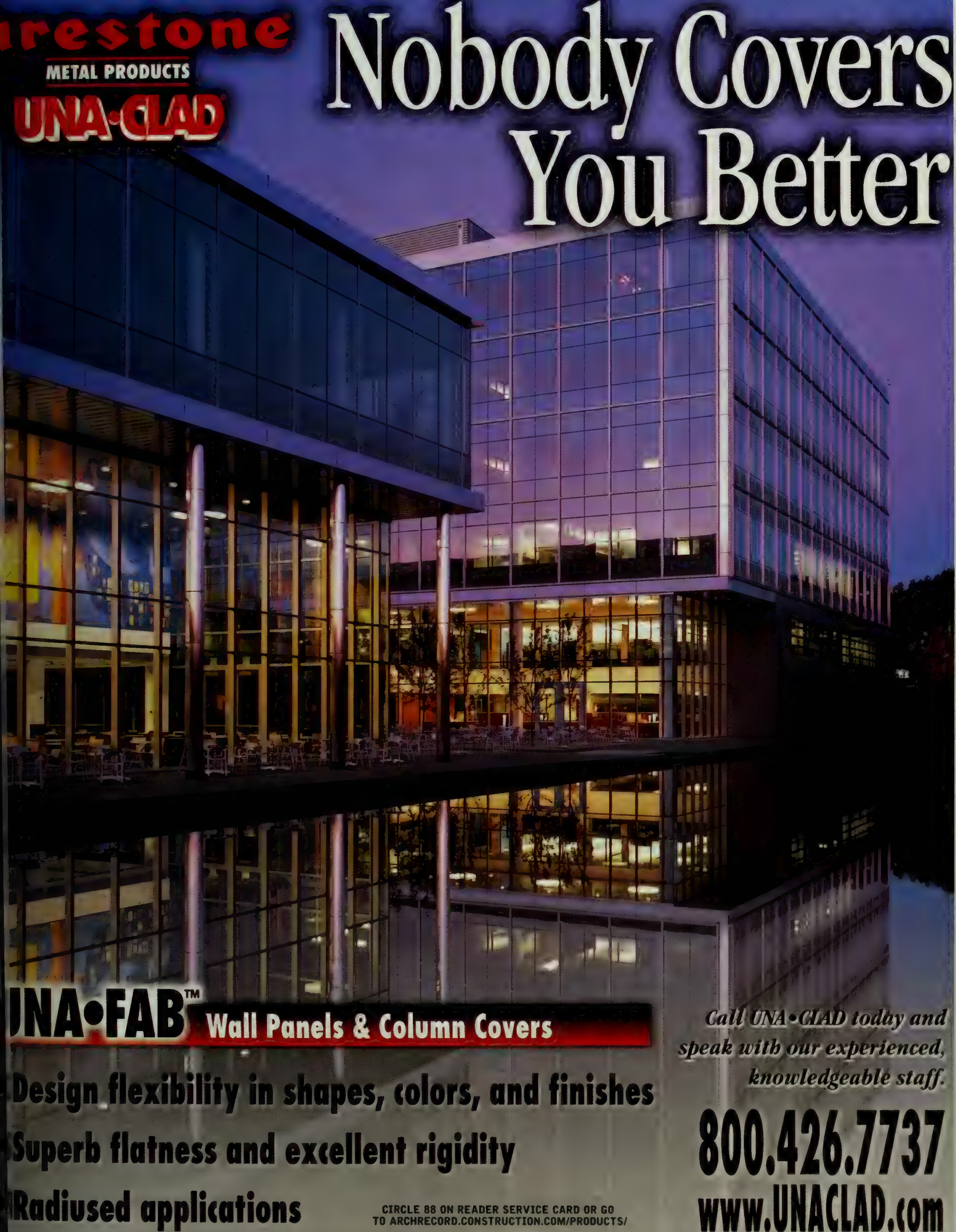restone
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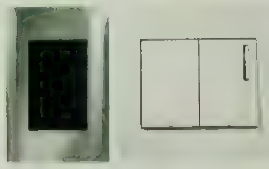

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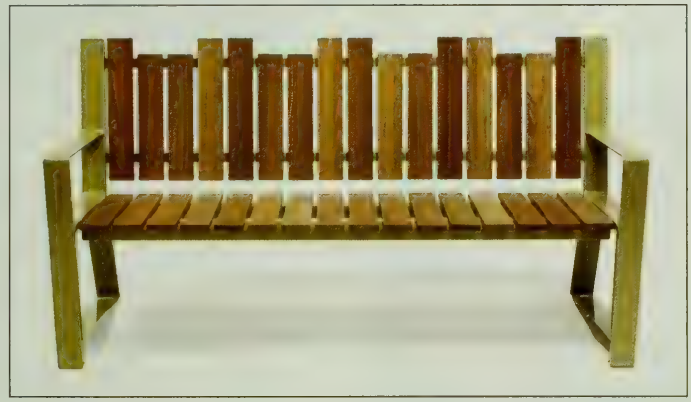
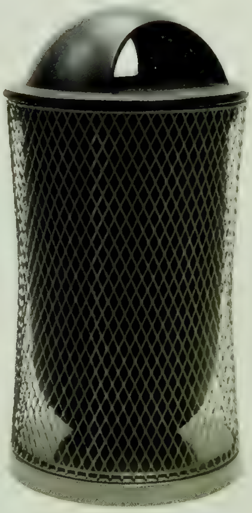
Products Landscape

Our review of products for **outdoor spaces** includes site furnishings made in a range of materials from concrete to fiberglass, as well as an unusual canopy and a lighter-weight retaining wall. For what's new in landscaping, check out the ASLA's Annual Meeting & Expo, held 10/6–10/9 in Minneapolis. *Rita Catinella Orrell*





gh-tech meets low-tech in three new site-furniture collections

signed by a triad of architects and signers, the Landmark Collection utdoor furnishings was inspired amiliar themes in historic design, hitecture, and nature. The eside group, by architect Margaret Curry, of Tigerman McCurry hitects, was influenced by farms, ages, small towns, and lakeside nmunities. The group includes e benches (backed and backless) that share a formed steel frame and are reminiscent of the traditional front-porch swing. Picket Fence features a slatted seat and back expressed as staggered "pickets" and rendered in jarrah wood or polysite, a decking material. Grass and Leaves benches render motifs from nature onto perforated-metal seats and backs. All three styles have matching litter receptacles. The Parc Vue collection, by John Rizzi, includes a fresh take on the classic Parisian park bench; a matching litter basket can be used with a liner or a clear trash bag for security. Towne Square, designed by Brian Kane, marries the classic metal-strap motif with state-of-the-art plasma cutting. Kane also has a collection of Minimal bike racks. Landscape Forms, Kalamazoo, Mich. www.landscapeforms.com CIRCLE 206

Clockwise from top left: The stainless-steel Ring bike rack can secure two bicycles. The Grass bench features a marsh grass motif cut out of sheet-steel seats and backs (custom patterns can be specified for $100). Parc Vue litter receptacle with polyethylene urn-shaped liner; Picket Fence, shown in jarrah wood; Leaves litter receptacle with falling-leaf-shaped cutouts.

more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

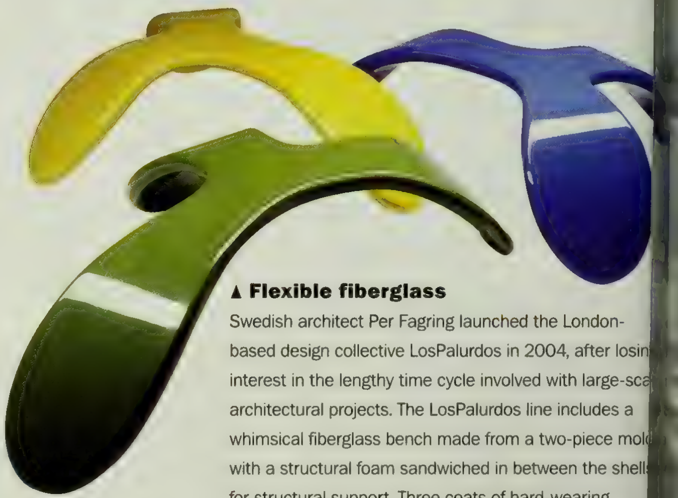
Products Landscape

▲► Substantial site furniture

The Signature Line of concrete site furnishings from Wausau Tile includes four distinct design styles for a range of projects. The Modern, Classic, Pottery, and Prairie collections feature an acid-washed finish that gives the appearance of a cast-stone finish, as well as a weathered patina finish that intensifies with time. With its clean lines and simplicity of design, the Modern family includes planters, benches (one of several designs shown above), wastebaskets, and multipurpose bollard/benches (pedestal version, shown right). Wausau Tile, Wausau, Wis. www.wausautile.com **CIRCLE 207**

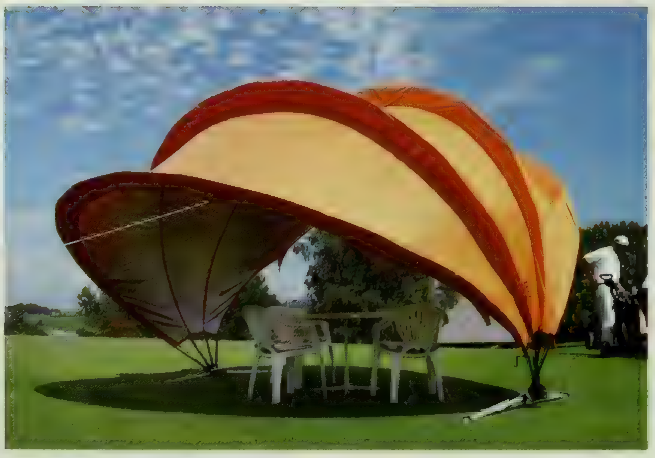
► Improved wall system

Belgard, a division of Oldcastle APG, has added several new products to its collection of pavers, steps, and walls. Celtik Wall (right) is a retaining wall that emulates the look of rough-hewn antique natural stone. The new wall is not only lighter in weight, but also more installation-friendly, with an improved Anchor Pin System for better positioning and stability. The product is ideal for retaining walls up to 8' in most residential settings. Oldcastle APG, Atlanta. www.belgard.biz **CIRCLE 208**



▲ Flexible fiberglass

Swedish architect Per Fagring launched the London-based design collective LosPalurdos in 2004, after losin interest in the lengthy time cycle involved with large-sca architectural projects. The LosPalurdos line includes a whimsical fiberglass bench made from a two-piece mol with a structural foam sandwiched in between the shell for structural support. Three coats of hard-wearing polyurethane finish are available in six standard colors. LosPalurdos, London. www.lospalurdos.com **CIRCLE 209**



▲ Your own private pavilion

The wogg-pavilion, designed by L.A.-based Studio Mousetrap, provides another option for creating privacy and protection in outdoor spaces. Doubling as a gazebo, children's play zone, or even an outdoor bedroom, the canopy's design was inspired by the look and spirit of hang gliders and Chinese lanterns. Intended to fit into a range of architectural styles, it comes in four colors, measuring 14' wide x 10' tall or 11' wide x 8' tall. Designed to go up like a tent, four flexible fiberglass rods insert into the canopy while "stylish" sandbags and stakes add stability, and anchoring ropes adjust to secure it at any angle. Studio Mousetrap, Los Angeles. www.studiomousetrap.com **CIRCLE 210**

▼ Sitting pretty seaside

Sutherland's new Camano Collection comes in three versions with nautical styling: Yachting, Deck, and Beachfront. The Yachting furniture group combines teak with te tured powder-coat aluminum, making for an overall lighter weight. The Deck pieces are crafted in solid teak, which may be specified in Natural, Weathered, or Dark Sealer. Beachfront is rendered in a marine-grade enameled mahogany, available in four colors (left, Loveseat i Dusk). Sutherland, Dallas www.sutherlandteak.co **CIRCLE 211**

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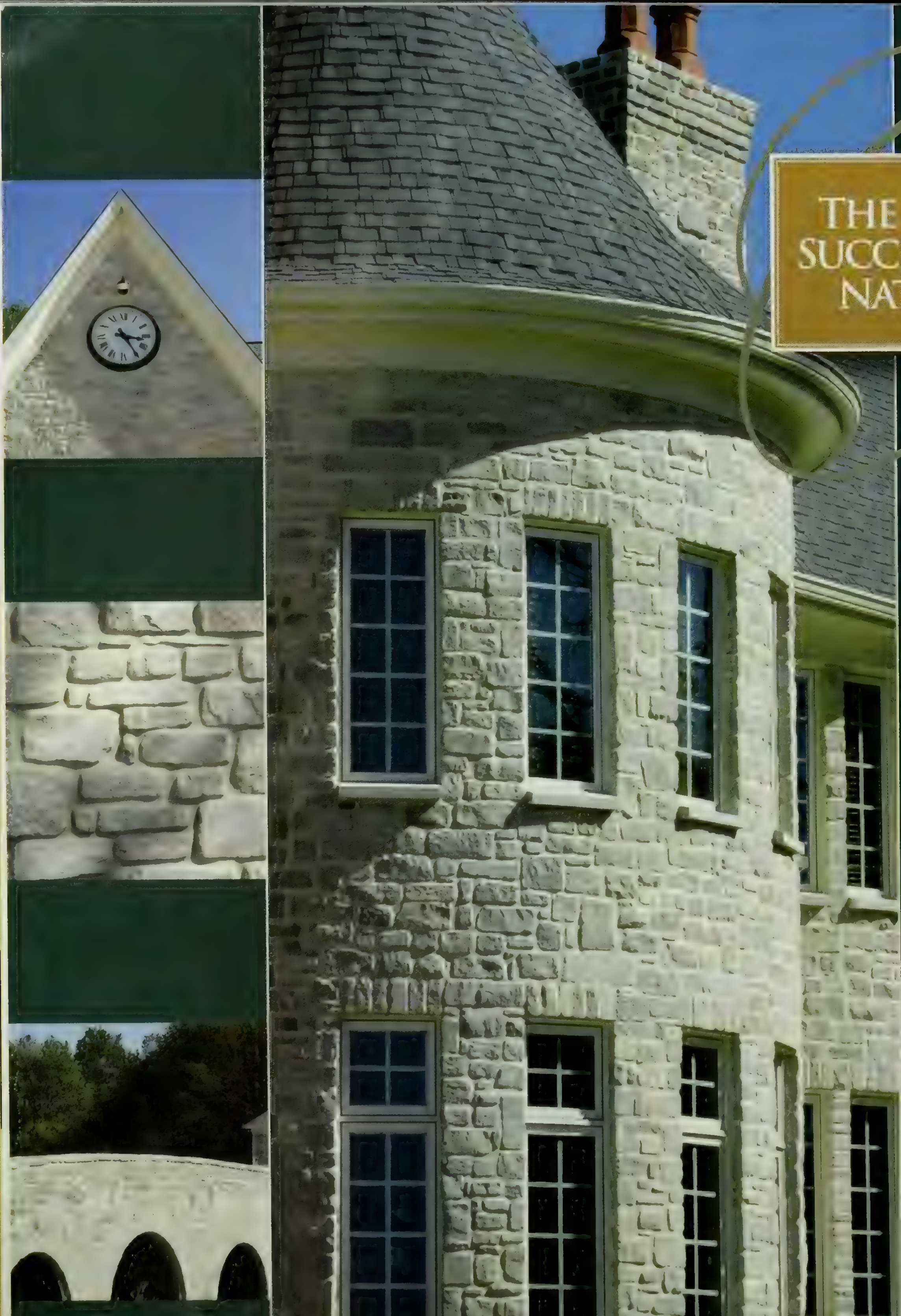

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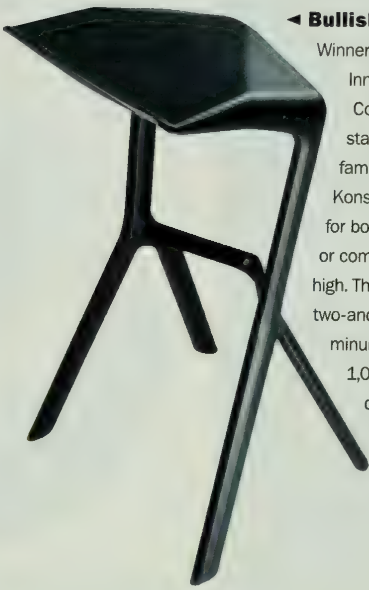
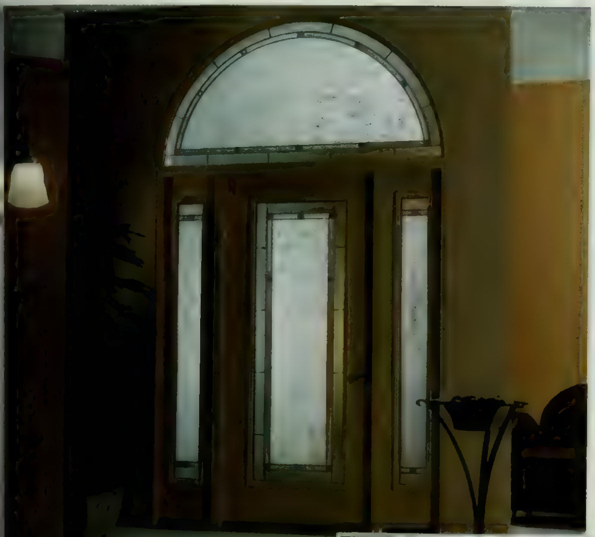


◂ Bullish stacking stool

Winner of a Best of the Best Interior Innovation Award at this year's Cologne Furniture Fair, the Miura stacking stool offers a new take on familiar furnishing. Designed by Konstantin Grcic, the stool is designed for both indoor or outdoor and residential or commercial use and stacks up to four high. The stool's polypropylene material is two-and-a-half times stronger than aluminum and can support an impressive 1,058 pounds. The stool takes its design inspiration and name from the Miura bulls that are bred in Spain. The ICF Group, New York City. www.icfgroup.com **CIRCLE 212**

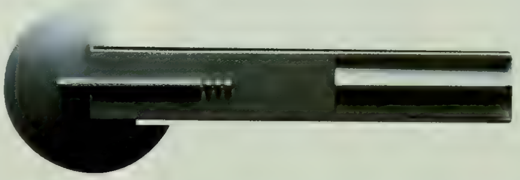


▸ New door-glass designs

pired by the Arts & Crafts movement, L's Michael Graves Collection features iceful curving lines drawn from nature, within arrangements of repeated geo- tric forms. The textured or frosted glass ed in the designs, which include Acacia, ur-de-lis, and Vienna (top, with matching nsom and sidelights) provides privacy. o new from ODL are motorized door- ss blinds that feature blind slats sealed ween two panels of tempered safety ss. The battery-powered motorized tilt tem easily tilts slats open or closed at the touch of a button, which is integrated the door-glass frame. The blinds meet ADA requirements for accessible forward ch and operating force. ODL, Zeeland, Mich. www.odl.com **CIRCLE 214**

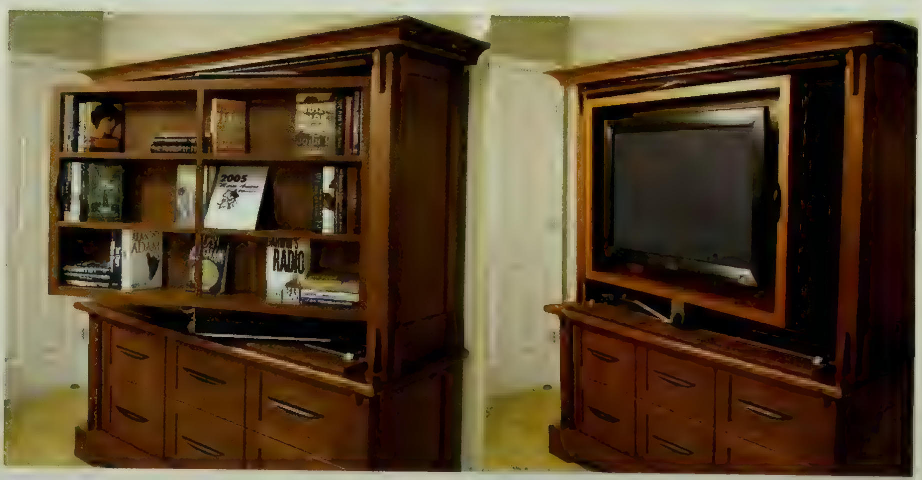
▾ Door jewelry

Originally commissioned by a Japanese manufacturer and in the permanent collection of the Denver Art Museum, the Lock-it lever is now available directly from George Ranalli Designs. Designed by architect George Ranalli, Lock-it is the premier product offering from the Door Gems line of architectural hardware. Cast in aluminum in China and finished, polished, powder coated, and packaged in New Jersey, the lever will be joined by other hardware and houseware pieces in the future. George Ranalli Designs, New York City. www.georgeranallidesigns.com **CIRCLE 213**



TV cabinet system to flip over

wds gathered at the Reversica booth at January's rnational Builders Show to see a demo of the rotat- Gyre 6300 cabinet system, which can double the of a room by hiding most 50" plasma or LCD televi- s behind 12' of full-size bookshelves. Ideal for home ater applications, the system can hold up to 375 nds in a 17½" depth. Placing the hardware in a wall ween two rooms allows clients to access the TV from er room. The Gyre Slim, a thinner 7½" version of the dard, allows for the display of original artwork or a or on one side and a thin-screen TV on the other. hardware design is used by several U.S. furniture panies, but is available to cabinetmakers, wood- kers, and other crafts- and tradespeople. Reversica ign, Santa Cruz, Calif. www.reversica.com **CIRCLE 215**



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Senior Living Monograph and 2 quizzes: $325 ($245 for current NCARB Record holders)

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The National Council of Architectural Registration Boards newly released monograph, *Senior Living*, centers around 20 most commonly asked questions about this special building-type. *Senior Living* will update your knowledge to design for today's senior.

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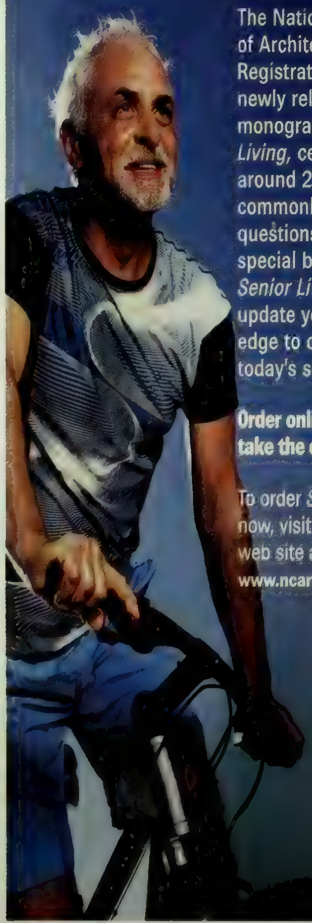
To order *Senior Living* now, visit the NCARB web site at **www.ncarb.org/senior1.**



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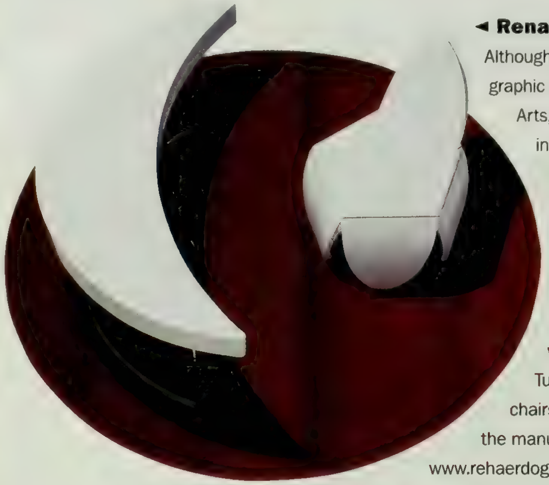
Product Briefs



◄ Renaissance man

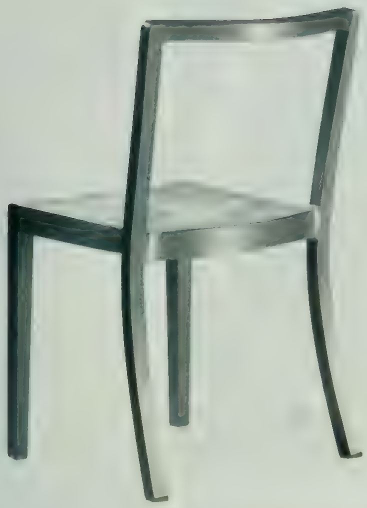
Although Turkish designer Reha Erdogan studied graphic design at the Istanbul Academy of Fine Arts, it is just one of the many areas he works in. A painter, sculptor, and furniture and lighting designer, Erdogan has created more than 80 pieces that are manufactured and sold by Damat Tween Life, a menswear retailer located in Istanbul. His recent chair designs include Luna & Star, a set of handmade wooden pieces with a white finish that resemble the Turkish flag (left). According to Erdogan, the chairs can be shipped directly from Istanbul by the manufacturer. Damat Tween Life, Istanbul. www.rehaerdogan.net CIRCLE 216

▼ Fabric facade

Last September, Tencat Productions, a custom fabrication shop in Evanston, Illinois, created an exterior facade and courtyard installation for the Saltaus Restaurant and Bar on West Randolph in Chicago. Individual structural aluminum frames made in squares of various sizes (but the same depth) were covered in custom-sewn Awntex mesh fabric, which zips closed in back. Each piece was sewn and fit individually into the frame and mounted on the brick building face, creating a flat, Modernist facade that breaks into an unexpected moiré when examined closely. Tencat Productions, Evanston, Ill. www.tencat.net CIRCLE 217

▲ Charitable kids collection

When a group of second-grade students were aske to illustrate "good things" to cheer up hospitalized children, they responded with pictures of ice cream cones, vacations, candy, and more. These drawings were used to create the Good Wishes upholstery collection, intended for health-care, institutional, res dential, and children's retail applications. Good Wish is made of 100 percent polyester flat-woven Crypto fabric, which is antimicrobial, and moisture-, mildew stain-, and odor-resistant. Ten percent of the sales o Good Wishes benefits Quilts for Kids, a charity that creates handcrafted quilts for children with life-thre ening diseases. Sina Pearson Textiles, New York Cit www.sinapearson.com CIRCLE 218



◂ Aluminum offspring

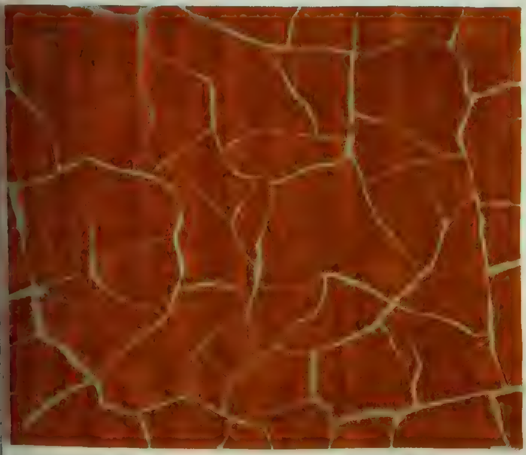
The new Icon chair is the latest progeny in the "wonderful love affair" (in the words of Emeco chairman Gregg Buchbinder) between Emeco and designer Philippe Starck. Launched at last month's Milan Furniture Fair, the new chair is handmade in 100 percent aluminum and features the outline of a back and slightly curved back legs. Icon will be available as a stacking chair and barstool in hand-brushed and hand-polished aluminum finishes. With a content of 80 percent recycled aluminum, Icon meets LEED criteria for an environmentally sound product. Emeco, Hanover, Pa. www.emeco.net **CIRCLE 219**

Cleansing concrete

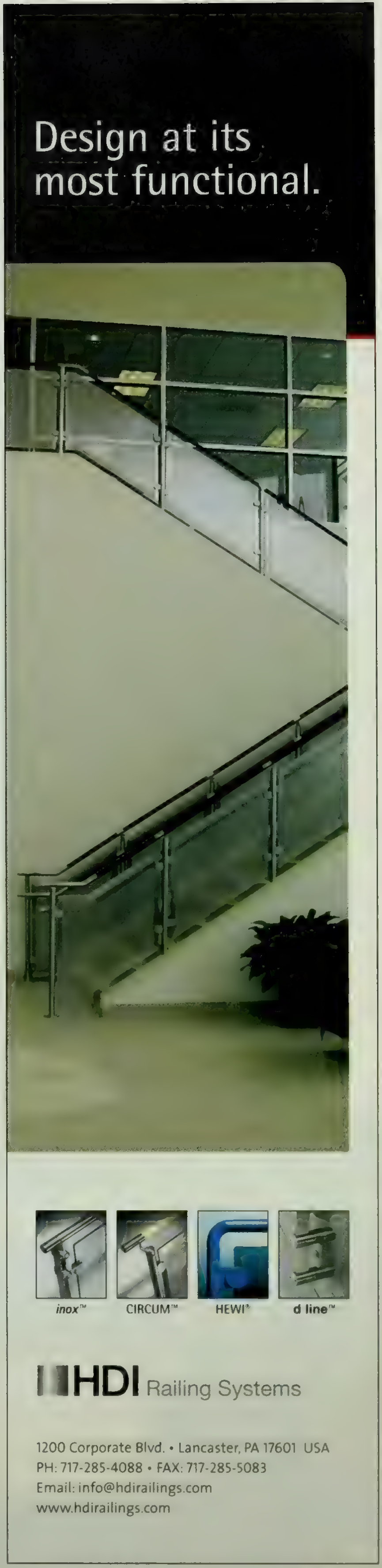
sroc Cement has begun North
nerican production of TX Millennium,
iich consists of two key products: TX
ca cement, which provides concrete
h a self-cleaning benefit, and TX Aria
ment, which provides concrete with
added ability to mitigate environ-
ntal pollution. The science behind
products is based on utilizing a
draulic binder with photocatalytic
perties that render concrete self-
aning and/or pollution-mitigating.
technology, which took a decade to
velop, was highlighted in the Dives in Misericordia church in Rome (above), designed by Richard Meier and
npleted in 2003. Essroc, Nazareth, Pa. www.essroc.com **CIRCLE 220**

ultured carpets

onto's W Studio recently introduced a series of carpets created in partnership with Renaissance ROM, the Royal
ario Museum's ongoing expansion and renovation project. All six designs, donated to the museum and on display in the new galleries and public spaces, can currently be purchased from the studio in standard and custom sizes. Each carpet represents a different culture on display in the various galleries. Mud Cracks (left) lies in the Gallery of Canada: First Peoples area, among large pieces such as kayaks, canoes, and snowshoes. It is intended to embrace the diversity of the native people, rather than represent one particular tribe. The carpets are hand-knotted in Nepal by Tibetan artisans using durable, hand-spun Tibetan wool. W Studio, Toronto. www.wstudio.ca **CIRCLE 221**



more information, circle item numbers on Reader Service Card or go to
.archrecord.com, under Products, then Reader Service.



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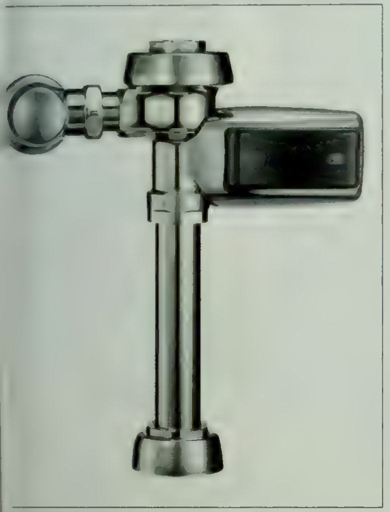
Product Briefs

Flushometer retrofit product

e new SMOOTH (Side Mount Operator Over the ındle) retrofit product from Sloan Valve Company ickly converts most manual flushometers into ıter-saving and hygienic sensor operation. Using ly a screwdriver, SMOOTH installs in less than a nute. There's no need even to shut off the water— t slide the product over the handle of a manual shometer and secure the clamp. SMOOTH fea- es a manual override button to use in the event a power failure, and it sleeps when the restroom lark, extending battery life. Sloan Valve Company, cago. www.sloanvalve.com **CIRCLE 222**



▲ Keep everything where you left it

Losses of more than $1 billion in the U.S. each year are due in part to a lack of effective security solutions for job-site assets. Williams Scotsman has announced a strategic relationship with Dewalt Industrial Tool Company to integrate the Sitelock portable wireless alarm system into its mobile office fleet for use on construction job sites. Through Sitelock's base unit, stationed in an indoor location (most often the job-site trailer), the remote sensors, such as a container vibration sensor, security cable lock, indoor motion sensor, and door/window contact sensors, can be programmed individually to monitor key assets and areas on the site. A central monitoring service is available. Williams Scotsman, Baltimore. www.willscot.com **CIRCLE 223**

oncrete mix ers more control

ımmended for use in itectural block, single- e masonry construction, ıg stones, segmental ning wall units, concrete tile, and precast/pre- sed concrete, the pel Plus water-repel- efflorescence control xture offers an improved ion for manufactured rete products and for ıst/prestressed-concrete ıcers experiencing problems with water-repellency and efflorescence control. The novel chemistry of the pel Plus admixture gives it improved primary efflorescent control, enhanced color vibrancy and visual appeal, ncreased strength performance. It also exhibits excellent wind-driven-rain resistance and improves material and extrusion characteristics. Degussa Admixtures, Cleveland. www.degussa.com **CIRCLE 224**

ore information, circle item numbers on Reader Service Card or go to archrecord.com, under Products, then Reader Service.

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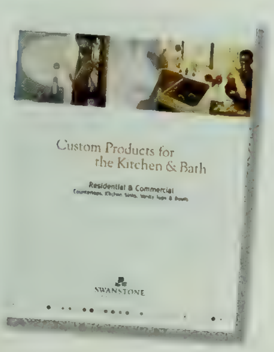
Product Resource: Literature

ntrance product catalog

)ecial-Lite's *Complete Entrance Systems ith More Life* brochure showcases the ompany's complete line of entrance oducts and explains how they contribute green design. Monumental doors, aluinum flush doors, AMP and FRP flush)ors, and framing products are covered.)ecial-Lite, Decatur, Mich. ww.special-lite.com **CIRCLE 225**

Residential insulation catalog

CertainTeed's new full-line residential insulation product catalog gives a comprehensive overview of the company's residential insulation products for thermal, acoustical, and moisture-control applications. The 24-page overview provides detailed product descriptions along with material specifications, installation instructions, maintenance recommendations, and other technical information. CertainTeed, Valley Forge, Pa. www.certainteed.com **CIRCLE 226**



tchen and bath spec guide

anstone's 16-page guide is divided into ee sections: Everyday Plus (stock) and ;tom countertops, kitchen sinks (solid face, granite, and stainless steel), and tom vanity tops and bowls. A chart of 38 solid-surface and granite colors I detailed size specifications is included. Swan Corporation, St. Louis, Mo. v.swanstone.com **CIRCLE 227**

Set for specifying

Set Wallcovering Systems has designed a new resource binder for the System One collection of commercial wall coverings. Manufactured using 100 percent recycled materials with a built-in handle for easy transport, the binder includes external hang tags for quick product reference. Set Wallcovering Systems, Atlanta. www.setwalls.com **CIRCLE 228**

nore information, circle item numbers on Reader Service Card or go to .archrecord.com, under Products, then Reader Service.

How do you Swing?

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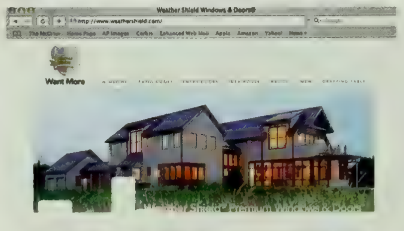
Product Resource: On the Web

www.crossvilleinc.com

Tile manufacturer Crossville has launched the first of a multiphase redesign of its Web sit The new site maintains all the features and functionality of the former site, with a more Minimalist look, easier navigation, and more powerful search tools. Upgrades throughout 2006 will include content tailored for different user groups, such as consumers and designers, as well as a new tool to allow visitors to use their own photos.

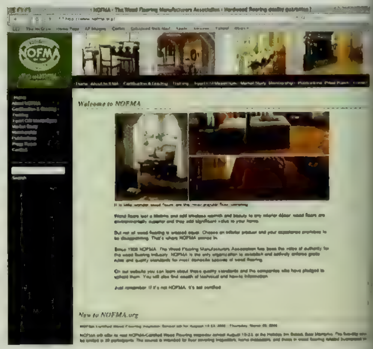
www.weathershield.com

Weather Shield Windows & Doors has launched a redesigned Web site that offers builders and architects instant access to complete product information, specifications, and images. A "scrapbook" helps visitors save images while a design area offers line drawings that can provide inspiration when developing a windowscape for a new projec



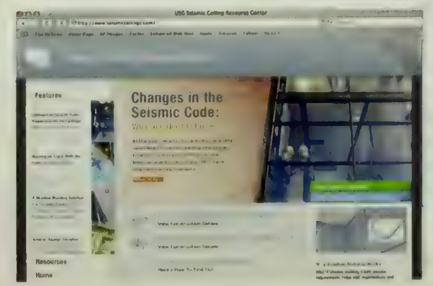
www.nofma.org

NOFMA redesigned its Web site to provide technical product information on wood flooring, as well as information on the organization and its members. The site will feature an up-to-date listing of all manufacturing members and certified wood flooring inspectors, as well as detailed information and photos depicting wood flooring grades and end uses.



www.seismicceilings.com

USG has added a new educational site that gives building and design professionals an introduction to seismic ceiling construction and USG's code-compliant products. The ne Seismic Ceilings Resource Center features a number o articles about the changes i the IBC, FAQs about produc usage, interviews with ceilin experts, and a comprehens library of architectural detai that are easily accessed online and downloadable either in PDF or CAD forma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Features
Changes in the Seismic Code:
Resources
Home

Monte Carlo Hotel & Casino Las Vegas Photo courtesy of Sto Corp

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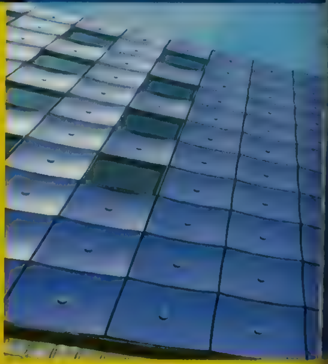

Dates & Events

lew & Upcoming xhibitions

haos or Control
›s Angeles
ay 1–June 7, 2006
ı exhibition of work by four young photograiers—Walead Beshty, Shannon Ebner, Eve wler, and Arthur Ou—that explores the interction of language, gender, sculpture, and chitecture in a variety of media. At Perloff illery, UCLA Department of Architecture and ban Design. Call 310/267-4704 or visit vw.aud.ucla.edu.

Citta Pulpa and Other Stories
s Angeles
ıy 8–June 7, 2006
aig Hodgetts, a professor in the UCLA partment of Architecture and Urban Design d principal of Hodgetts + Fung Design sociates, will exhibit a cyber city comic strip h models. At Perloff Hall, UCLA Department of hitecture and Urban Design. Call 310/267-)4 or visit www.aud.ucla.edu.

ˌaro Siza/Architect: Drawings, Models, otographs
nta Monica, Calif.
y 13–August 19, 2006
first museum survey in the United States to lore the distinguished 50-year career of preınent Portuguese architect and Pritzker-Prize ner Alvaro Joaquim de Meio Siza Vieira. The ibition's drawings, models, and photographs illustrate the attention to spatial relationships, sitivity to material and texture, and use of light ın expressive and active element that transıs Siza's buildings into remarkable ɔodiments of grace and beauty. Awarded the ıest honors in his profession, Siza teaches at Oporto School of Architecture in Portugal. At Santa Monica Museum of Art. Call 310/586-}8 or visit www.smmoa.org.

ıt of Friends: Buckminster Fuller and mu Noguchi
ıg Island City, N.Y.
' 19–October 15, 2006
relationship between Noguchi and visionary gner and inventor Buckminster Fuller are illuated in this special exhibition, which includes lels, sculptures, drawings, photographs, film footage, and letters. At the Noguchi Museum. Call 718-204-7088 or visit www.noguchi.org.

Solos: Matali Crasset
New York City
May 19–September 24, 2006
In the fourth installment of the *Solos* exhibition series, Cooper-Hewitt will present the work of French industrial designer Matali Crasset in her first solo museum exhibition in the United States. Crasset, who began her career working for Philippe Starck, is one of Europe's most exciting and original young designers. Her work explores residential and urban rituals and the domestication of technology and includes industrial design products, graphics, theater sets, wallpaper, and furniture. At Cooper Hewitt, National Design Museum. Call 212/849-8400 or visit www.ndm.si.edu.

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The Green House: New Directions in Sustainable Architecture and Design
Washington, D.C.
May 20, 2006–June 3, 2007
The exhibition will explore the building materials, consumer products, and energy systems that offer attractive and often affordable sources of the latest in home-building technology and products. Through the exhibition and related programming, *The Green House* will explore developments in sustainability and will provide an informative overview of this dynamic design movement. This exhibition will take a look at some questions homeowners often ask when considering a green home or product, including: What makes a product green? How is a green home healthier, safer, and more comfortable? and How much does it cost to "go green?" The show will include a life-size replica of California architect Michelle Kaufmann's Glidehouse, an example of a "Green Trend House" that demonstrates sustainable principles. It also features models, photographs, and drawings of other contemporary projects around the world that show how sustainable principles are applied with innovation and beautiful results. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Seattle Architecture Foundation Tours
Seattle
May 20–October 28, 2006
Seattle Architecture Foundation connects people to architecture through popular guided walking tours, exhibitions, youth programs, and public forums—programs that inspire participants to engage in shaping their community. For more information, visit www.seattlearchitecture.org.

From Wood to Architecture: Recent Designs from Finland
New York City
May 26–August 25, 2006
This exhibition takes a fresh look at the possibilities offered by the oldest of building materials: wood. Organized by the Museum of Finnish Architecture, the exhibition explores the current resurgence of wood as a building material. It presents 17 recently constructed buildings in Finland, ranging from cultural centers to summer cottages to churches. The architects include established, internationally known figures such as Kristian Gullichsen, Mikko Heikkinen, and Markku Komonen, as well as a new generation of young designers, including Anssi Lassila and Ville Hara. At Scandinavia House: The Nordic Center in America. For more information, all 212/879-9779 or visit www.scandinaviahouse.org.

Ongoing Exhibitions

Hiroshi Sugimoto
Washington, D.C.
Through May 14, 2006
The first career survey of one of Japan's most important contemporary artists. Sugimoto is a photographer known for his starkly minimal images of architecture, seascapes, and movie theaters, as well as his richly detailed photographs of natural history dioramas, wax portrait and Buddhist sculptures. At the Smithsonian Hirshhorn Museum and Sculpture Garden. For more information, call 202/633-1000 or visit www.hirshhorn.si.edu.

Between Form and Circumstance: Re-Thinking the Contemporary Landscape
Cambridge, Mass.
Through May 24, 2006
An exhibition of the recent practice of Michael Van Valkenburgh Associates. At Harvard

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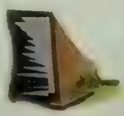
Fully Integrated Stairs



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University Graduate School of Design. Visit www.gsd.harvard.edu.

Barns of Western Pennsylvania: Vernacular to Spectacular
Pittsburgh
Through May 28, 2006
This exhibition features 26 regional barns and traces the development of this important icon from a simple log building to what in some cases might be described as an elaborate, cathedral-like structure. In addition to historic construction, the exhibition illustrates the continued inspiration of the barn to architects and presents examples of barns that have been adapted for contemporary, nonagricultural use. At the Heinz Architectural Center at Carnegie Museum of Art. For additional information, call 412/622-3131 or visit www.cmoa.org.

Barcelona in Progress
New York City
Through June 11, 2006
An exhibition presenting Barcelona's dramatic Post-Franco transformation, through the present. Architectural models, renderings, and photographs outline a framework for the progressive urban trajectory this city has chartered, and a global context for evaluating developments in large-scale metropolitan planning. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

Ettore Sottsass
Los Angeles
Through June 11, 2006
Italian designer and architect Ettore Sottsass is internationally acclaimed for his contribution to product design, furniture, ceramics, glass, jewelry, silverwork, and architecture. This retrospective exhibition of his work includes approximately 100 objects arranged chronologically, and by specific media, in an installation conceptualized by Sottsass himself. At the Los Angeles County Museum of Art. Call 323/857-6522 or visit www.lacma.org.

Southpoint: From Ruin to Rejuvenation—ENYA International Ideas Competition Exhibition
New York City
Through June 17, 2006
The Emerging New York Architects (ENYA) Committee presents an exhibition of the second biennial international ideas competition. The exhibition features 77 visions for a Universal Arts Center at Southpoint Park on Roosevelt Island. ENYA Prize recipient, second place, third place, student prize, and historic preservation award, along with 42 selected entries, are included in the accompanying catalog. At the Center for Architecture. For more information, call 212/683-0023 or visit www.aiany.org.

Secret Cities: Extraordinary Urban Photography
Chicago
Through June 17, 2006
The contemporary photographers in this exhibition are poets of light and shadow. Included in the show are works by Christophe Valsecchi, John Kimmich-Javier, Darris Lee Harris, Alex Fradkin, Jay King, Tony May, and Madeline Doering. At ArchiTech. For more information, call 312/475-1290 or visit www.architechgallery.com.

Morphosis
Paris
Through July 17, 2006
Sixteen projects (layouts, drawings, photographs, etc.) from the Morphosis agency, currently involved in the construction of numerous buildings, are on view to convey the idea of architecture as "in the act." Screens and Webcams open windows onto buildings in operation or sites under way in order to follow their evolution. At Centre Pompidou. Visit www.cnac-gp.fr/pompidou.

ults of Heaven:
nctuaries of Byzantium
w York City
rough July 28, 2006
exhibition of 30 large-format lor photographs of some of the eatest examples of Byzantine chitecture. Captured by the nowned Turkish photographer and chitect Ahmet Ertug, the striking ages reveal in astonishing detail extraordinary churches and nctuaries of ancient Byzantium. the World Monuments Fund llery. For additional information, 646/424-9594 or visit w.wmf.org.

lus Shulman, Modernity
d the Metropolis
shington, D.C.
ough July 30, 2006
exhibition offers highlights from recently acquired archives of us Shulman, the internationally owned photographer whose nic images helped to define dern architecture. His photo- ohs, such as those of Richard Neutra's Kaufmann House in Palm Springs (1947) and Pierre Koenig's Case Study House #22 in the Hollywood Hills (1960), transcend mere documentation of steel and glass. They reveal the essence of the architects' visions and capture the spirit of the eras when the structures were conceived. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lectures, Conferences, and Symposia

Retail Lighting
Cleveland
May 2–3, 2006
Professionals who specify retail lighting or supervise the maintenance of lighting in department, grocery, specialty, or mass merchandise stores comprise the target audience for this conference. With presentations in full-scale retail settings and interactive sessions, participants experience effective demonstrations of state-of-the-art lighting alternatives and learn about lighting solutions for their own applications. Topics include energy-efficient lighting system alternatives; light and color in the retail environment; current energy legislation; and retail lighting design strategies and detailing. Includes a hands-on workshop and optional postconference off-site store tours. At the Lighting Institute. Call 800/255-1200 or visit www.gelighting.com.

Political Outreach Committee Breakfast
Los Angeles
May 3, 2006
A breakfast reception with guest speaker Roger Moliere—executive officer, Real Property Management & Development, Los Angeles County Metropolitan Authority. At the California Club. For more information, call 213/639-0777 x16 or visit www.aialosangeles.org.

Symposium: AIA Top Ten Green Buildings of 2006
Washington, D.C.
May 3, 2006
For the past 10 years the American Institute of Architects' Committee on the Environment (COTE) has annually celebrated the best sustainable design projects identified through a juried competition. In a program moderated by James Binkley, FAIA, 2006 COTE chair, and Henry Siegel, FAIA, a member of the 2006 COTE advisory group, jury members and several of the 2006 Top Ten Green Building winners will discuss the performance metrics and the "lessons learned" from the winning projects. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

The Architecture of Sustainability
Shepherdstown, W.Va.
May 4–7, 2006
The conference considers the impact of sustainability on architectural design. Is sustainability an architectural agenda at all, or strictly an environmental one? Speakers

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will include Jeanne Gang of Studio Gang, James Timberlake of Kieran Timberlake, Andrew Whalley of Grimshaw, and others. Visit www.aia.org.

ARE Seminar
Los Angeles
May 6, 2006
The seminar features construction documents with William Amor, AIA. At the AIA Los Angeles Chapter Office. Visit wwwaialosangeles.org.

Architecture, Graphics, Food: Designing the Total Restaurant Experience
New York City
May 7, 2006
One of many panels being offered by the James Beard Foundation as part of its efforts to promote the culinary arts. Moderated by RECORD's James S. Russell, the panelists will consider just what makes restaurant design work, and will include Glen Pushelberg of Yabu Pushelberg, graphic designer Matteo Bologna of Mucca Design, and an executive chef. Held at 10 A.M. at the New York University Kimmel Center, 60 Washington Square South. $25. Call 212/620-7027 or visit www.jamesbeard.org/education/conferences.

The International Construction Super Conference 2006: Constructing and Financing Infrastructure
London
May 8–9, 2006
This year's sessions will emphasize constructing and financing major international infrastructure projects. The conference will include specialized regional programs for China, Eastern Europe, Asia, and Latin America. Also included are specific programs focusing on international power projects, wastewater projects, and airports. At the London Radisson SAS Portman Hotel London. To learn more, call 866/587-7280 or visit www.andrewsconferences.com.

Panel Discussion: Chaos or Control
Los Angeles
May 10, 2006
The panel will include James Welling, exhibition curator and professor; George Baker, professor; and exhibition artists Walead Beshty, Shannon Ebner, Eve Fowler, and Arthur Ou. They will discuss the intersection of language, gender, sculpture, and architecture. At Perloff Hall, UCLA Department of Architecture and Urban Design. Call 310/267-4704 or visit www.aud.ucla.edu.

BKLYN Designs
Brooklyn, N.Y.
May 12–14, 2006
The annual three-day show will feature Brooklyn-based designers and manufacturers of contemporary furnishings, including indoor and outdoor furniture, rugs, lighting, and accessories. It will signal the start of Design Week in New York City, America's answer to Milan's Salone Del Mobile, attracting thousands of visitors to DUMBO, Brooklyn's hub for cutting-edge design. Visit www.brooklyndesigns.net.

Green Building Expo: Rebuilding the Gulf Coast Stronger, Safer, and More Energy Efficient
Ocean Springs, Miss.
May 13, 2006
Eco-pioneer architect Pliny Fisk III will present his ecologically minded modular GroHome (a dwelling project well suited to the Gulf Coast relief efforts). Professor Fisk, co-director of the Center for Maximum Potential Building Systems, is also a Fellow of Sustainable Urbanism in the College of Architecture, Landscape Architecture, and Urban Planning at Texas A&M University.

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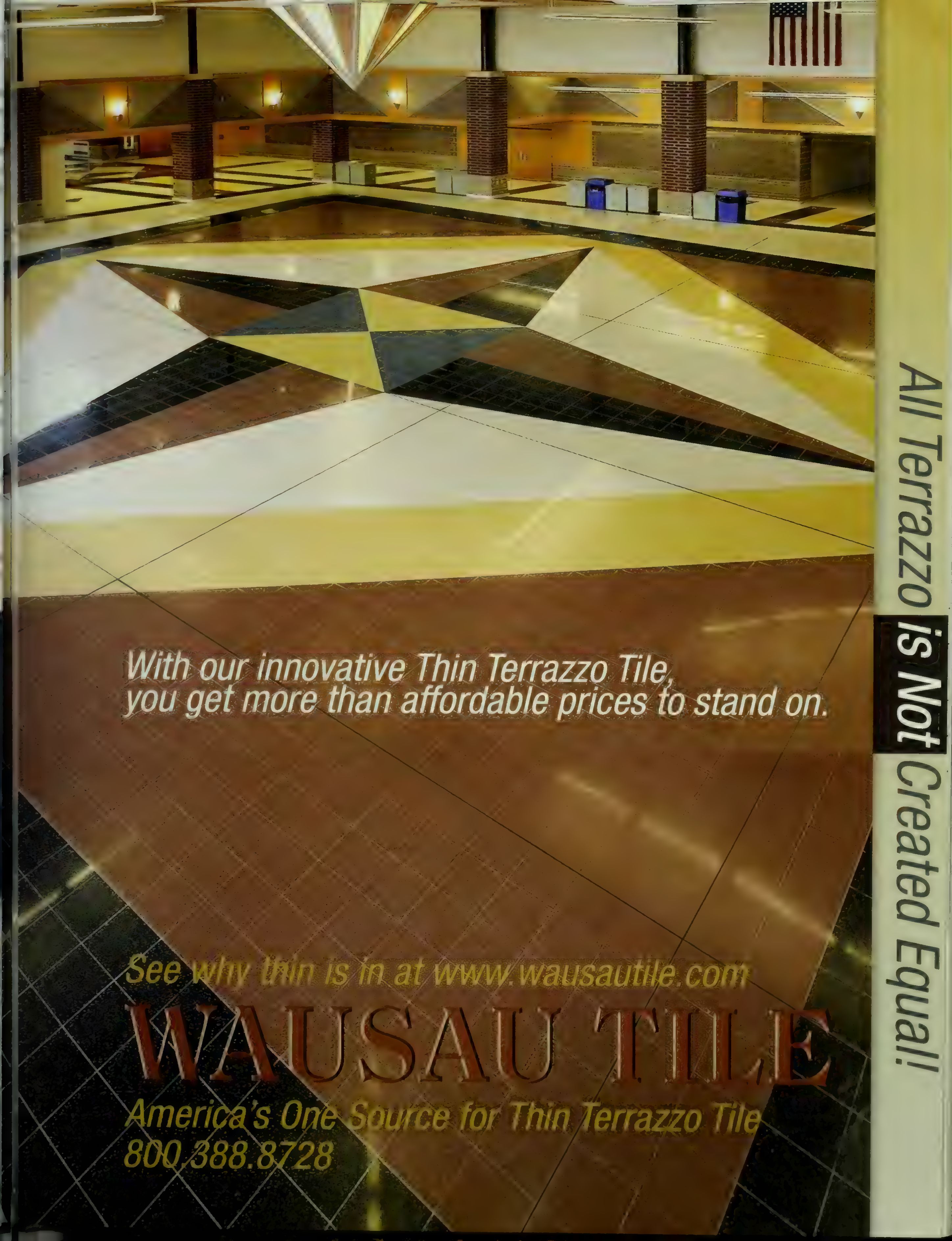
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Dates & Events

Michael Berk will introduce his GreenMobile project (an energy-efficient, sustainable mobile home currently being prototyped). Professor Berk is the F.L. Crane Endowed Professor of Architecture at Mississippi State University and an expert in Ecological Design. At the Ocean Springs Civic Center. Call 228-872-3457 or visit www.mississippi.sierraclub.org.

State Smart Growth Strategies: The Massachusetts Experience
Washington, D.C.
May 15, 2006
Anthony Flint, smart-growth education director in the Massachusetts Office of Commonwealth Development and author of the just-published *This Land: The Battle Over Sprawl and the Future of America*, will discuss the Massachusetts experience with a statewide smart-growth policy and the future of that policy after its champion, Governor Mitt Romney, leaves office this year. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lecture and Reception: SOM's Seventy Years of Iconic Designs
Washngton, D.C.
May 15, 2006
Since its founding in 1936, the architectural firm of Skidmore Owings & Merrill (SOM) has built some of America's most iconic buildings, including John Hancock Center, Sears Tower, Lever House, and the U.S. Air Force Academy. Today, its projects range from the Freedom Tower in New York to the Burj Dubai, expected to become the world's tallest building. Nicholas Adams, Mary Conover Mellon professor in the history of architecture at Vassar College, was granted unfettered access to SOM's archives to research his book, *Skidmore Owings & Merrill: The Experiment Since 1936* (Electa). He will discuss the firm's history, the ideas that drove its founders, and how it remains a vital force in architecture today. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Lecture: Dana Cuff
Los Angeles
May 15, 2006
Dana Cuff is a professor in the UCLA Department of Architecture and Urban Design, where she teaches courses related to the profession of architecture as well as special seminars on cultural issues, architectural programming, and urbanism. She presently is researching emergent pervasive computing technologies and their implications for design in the publi sphere. At Perloff Hall, UCLA Department of Architecture and Urban Design. Call 310/267-4704 or visit www.aud.ucla.edu.

Building Science and Technology Symposium
New York City
May 18–19, 2006
This two-day educational program outlines the fundamentals of building technology and addresses issues related to the construction, assessment, and remedial design o building envelopes as well as the theories and practices of building science in modern construction. Day one of the symposium focuses on building technology, and day tw covers challenges and solutions related to building science. At Park Central New York Hotel. To register for this event, please visit www.colpittsmeetings.com/ny.

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urbanism; the built environment and health; regional planning for the healthy city; community participation and democratic planning; urban fabric, social life, and healthy communities; traditional town planning and civic values; transit-based planning; reviving America's town squares; making places for civic engagement; ensuring the city's ecological and social sustainability; Child and family-friendly communities; village style development; transforming suburban sprawl; teaching urban planning for healthy communities. At La Fonda Hotel. For more information, visit www.livablecities.org.

Lecture: Elizabeth Diller
Los Angeles
May 19, 2006
Elizabeth Diller is a partner at New York–based Diller Scofidio + Renfro, an interdisciplinary studio that fuses architecture, the visual arts, and the performing arts. At Perloff Hall, UCLA Department of Architecture and Urban Design. Call 310/267-4704 or visit www.aud.ucla.edu.

Lecture: Marlon Blackwell
York, Pa.
May 19, 2006
Marlon Blackwell will give the annual Central Pennsylvania Chapter of the American Institute of Architects Lecture presenting recent works. Mr. Blackwell was featured in RECORD's February 2001 article, "Out There—Practicing Architecture Outside the Centers of Fashion" and his work was recently published in the monograph *An Architecture of the Ozarks: The Works of Marlon Blackwell*. At the Penn State York Pullo Family Performing Arts Center. For more information, call 717/236-8969 or visit www.aiacentralpa.org.

Lecture: David Rockwell
Los Angeles
May 22, 2006
David Rockwell is C.E.O. of the New York City–based Rockwell Group. Founded in 1984, it has 200 built projects to its credit. Characterized by innovative narrative, and a sens of theater, its projects include the Mohegan Sun Casinos; set designs for the Broadway musical *Hairspra* set design for *Team America: Wor Police*; the Chambers; and W hotel the Kodak Theater; and dozens of restaurants. At Perloff Hall, UCLA Department of Architecture and Urban Design. For more informatio call 310/267-4704 or visit www.aud.ucla.edu.

Metro's Many Creators
Washington, D.C.
May 22, 2006
A rapid transit system is not the creation of a single individual, agency, or profession, but a collab oration among planners, engineer architects, and citizens. Zachary Schrag, assistant professor of his tory at George Mason University, will present some of the interactions and debates that resulted in the Metro system we know today At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Symposium: 25 Years of Revitalizing Commercial Districts
Washington, D.C.
May 25, 2006
Over the past quarter century, the National Trust for Historic Preservation's (NTHP) Main Stree Center has stimulated $18.3 billio of reinvestment in commercial districts and the rehabilitation of 92,000 buildings. Doug Loescher director of the Main Street Cente will discuss its innovative preserva tion-based methodology and success stories from Washington D.C., and across America. John McGaw, coordinator for Commerc Revitalization and Small Business Development for the District of Columbia, and Bill McLeod, execu tive director of the Barracks Row Main Street program, will offer lo

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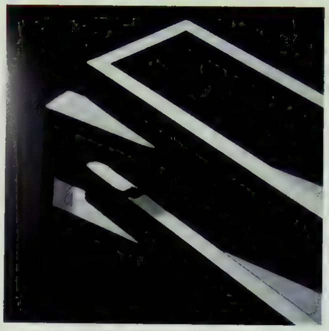

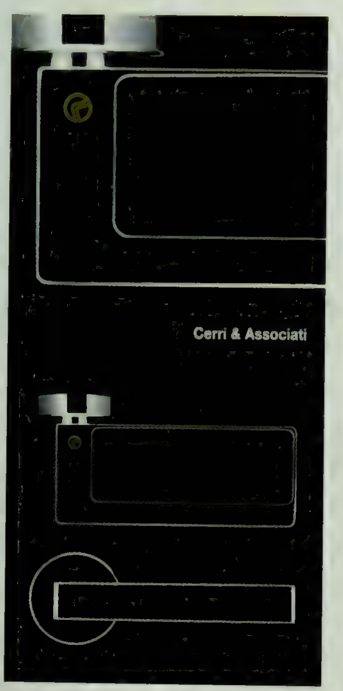

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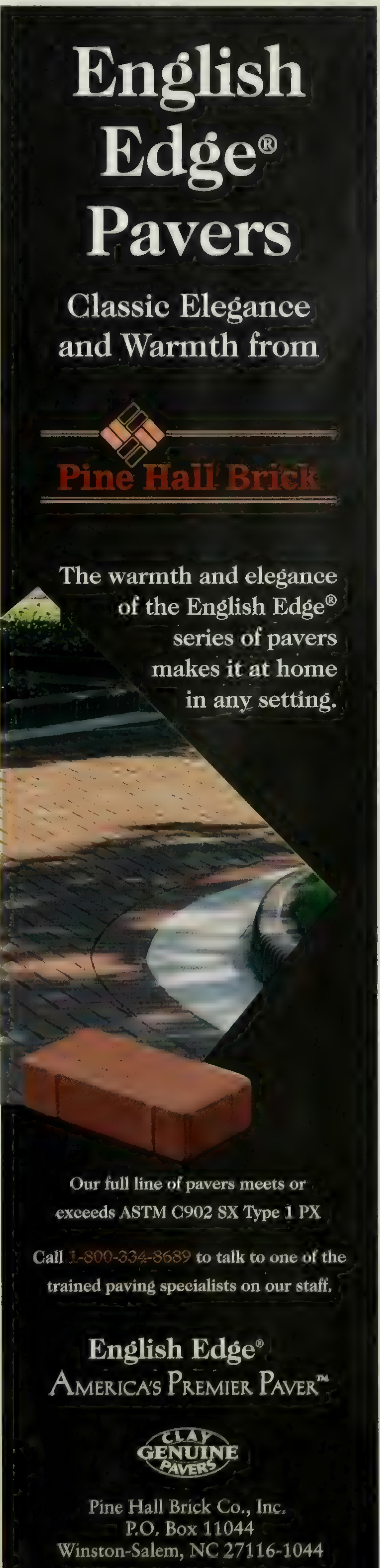
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perspectives. This program celebrates National Preservation Month. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Sensing the City II: Sensuous Explorations of the Urban Landscape
Montreal
Thursdays, through May 25, 2006
A free lecture series, presented in conjunction with the the Canadian Centre for Architecture's major exhibition *Sense of the City*, the series advances new readings of the urban environment through city surfaces and sensory phenomena. Featuring speakers whose work appears in the exhibition, the lectures will address lighting and fear in public space, city soundscapes, unconventional asphalt, and designing for cold climates. In the Paul Desmarais Theatre. Call 514/939-7026 or visit www.cca.qc.ca.

World Monuments: Touchstones of Past and Present: Taj Mahal
New York City
May 30, 2006
Part of a series of lectures on the meaning of iconic architectural monuments that embody the quintessential political, cultural, and historical fabric of their times. Focus is on the Taj Mahal, Agra, India, with Navina Haidar Haykel (associate curator, Department of Islamic Art, The Metropolitan Museum of Art) and Ebba Koch (professor of Asian Art, Institute of Art History, University of Vienna). At Grace Rainey Rogers Auditorium, The Metropolitan Museum of Art. Call 212/570-3949 or visit www.metmuseum.net or www.wmf.org.

International Symposium on Architecture and Human Rights
Bangkok
May 31–June 2, 2006
With international speakers from practice, government, academia, NGOs, and agencies, this symposium begins a dialogue about the relationship between design and rights—design as a valuable tool in the promotion and protection of rights, and the effect of rights on design and design practice. Topics include development and ethics, housing rights, environmental justice, the inclusive city, community development and architecture, advocacy, rights and the education of professionals. At the Prince Palace Hotel. For more information call 669/161-7283 or visit www.rights-bkk2006.com or www.arch.kmutt.ac.th or www.architecture-humanrights.org.

2nd Annual National Preservation Mont
Various Locations
May 2006
The National Trust for Historic Preservation will ce ebrate the second annual National Preservation Month in May 2006 and encourage citizens acro the country to participate in National Preservatio Month events being held in their communities. Additionally, the National Trust is seeking submi sions to its free online Preservation Events Calendar from organizations and individuals ho ing events and activities that celebrate Nationa Preservation Month. To learn more about these topics, or to view or submit activities and/or events to the online calendar call 202/588-614 or visit www.nationaltrust.org.

Boston By Foot
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Boston by Foot offers guided walking tours highlighting the city's rich architectural history. Choose from 20 scheduled tours, or groups tours scheduled by appointment. Visit www.bostonbyfoot.com.

Competitions

2006 Benjamin Moore HUE Awards
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Deadline for Grant Proposals: June 1, 2006
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to a stipend and research expenses of up to $60,000, Rafael Viñoly Architects will provide work space and support. Fellows are to be resident for terms of three to twelve months, between September 2006 and September 2007. For more information, visit www.rvatr.com.

20th Annual Excellence on the Waterfront Honor Awards Program

Deadline: June 2, 2006

The Waterfront Center Annual Awards Program is a juried competition to recognize top-quality urban waterfront projects, comprehensive waterfront plans, and outstanding citizen efforts. For details and entry form, call 202 337-0356 or visit www.waterfrontcenter.org.

Campus Planning

Deadline: June 9, 2006

New England architects and planners are invited to submit college and university projects completed throughout the world, and architects and planners throughout the world are invited to submit New England projects. For more information, visit www.architects.org/awards.

Unbuilt Architecture

Deadline: June 26, 2006

Architects, architectural educators, and architecture students throughout the world are invited to submit real or theoretical projects. Visit www.architects.org/awards.

The Vetter Inspired Project (VIP) Call for Entries

Deadline: July 1, 2006

A project may be entered by any project team member-architect, builder, remodeler, designer, or general contractor in which the project features Vetter windows and/or patio doors. For more information, call 715/693-8407 or visit www.vetterwindows.com.

Honor Awards for Design Excellence

Deadline: July 6, 2006

The annual Boston Society of Architects (BSA) honor awards program invites submissions of projects of any type anywhere in the world designed by Massachusetts architects, and also invites architects throughout the world to submit projects built in Massachusetts. For more information, visit www.architects.org/awards.

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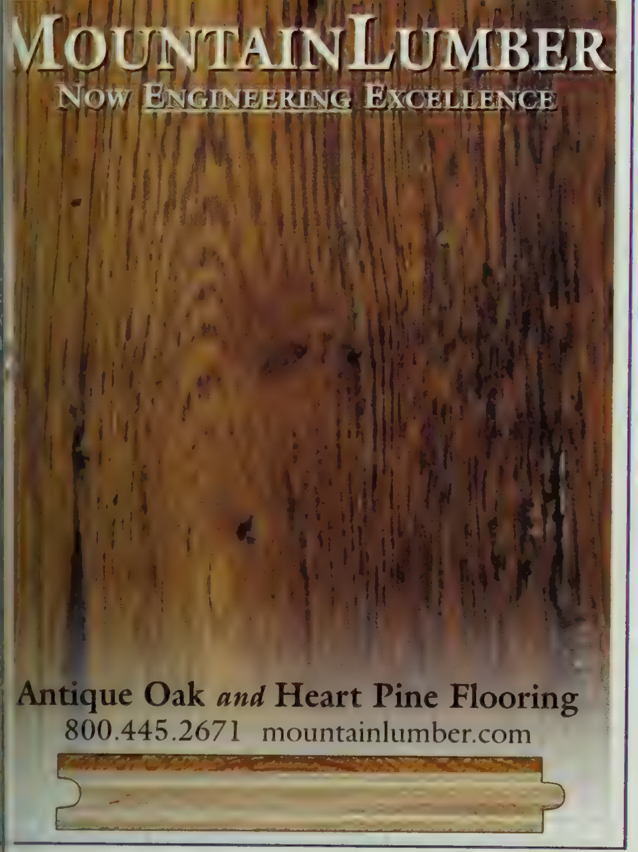

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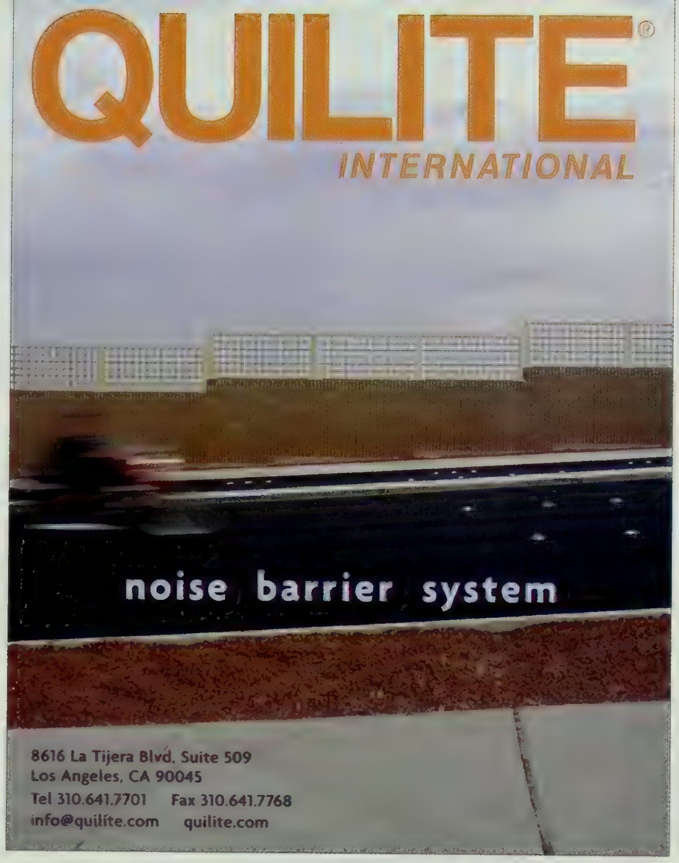

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Dates & Events

Deadline: July 15, 2006

Veneer Tech's competition aims to recognize excellence in woodwork and architectural woodwork that features natural edgebanding applications. Awards will be officially announced in August at the International Woodworking Fair (IWF) in Atlanta. Call 800/593-5601 or visit www.veneertech.com.

A Bridge Museum

Deadline July 17, 2006

This architectural contest promoted by Arquitectum seeks design entries for a new bridge to replace the Academy Bridge in Venice, Italy. The bridge is intended to become a city museum as well as a connecting bridge and entry to the Rio Alto. Visit www.arquitectum.com.

Juried Photo Exhibits at Build Boston

Deadline: August 1, 2006

All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. For more information, visit www.architects.org/awards.

Imagining Penn Center: A National Student Design Competition to Plan New Life for Philadelphia's Central Civic Space

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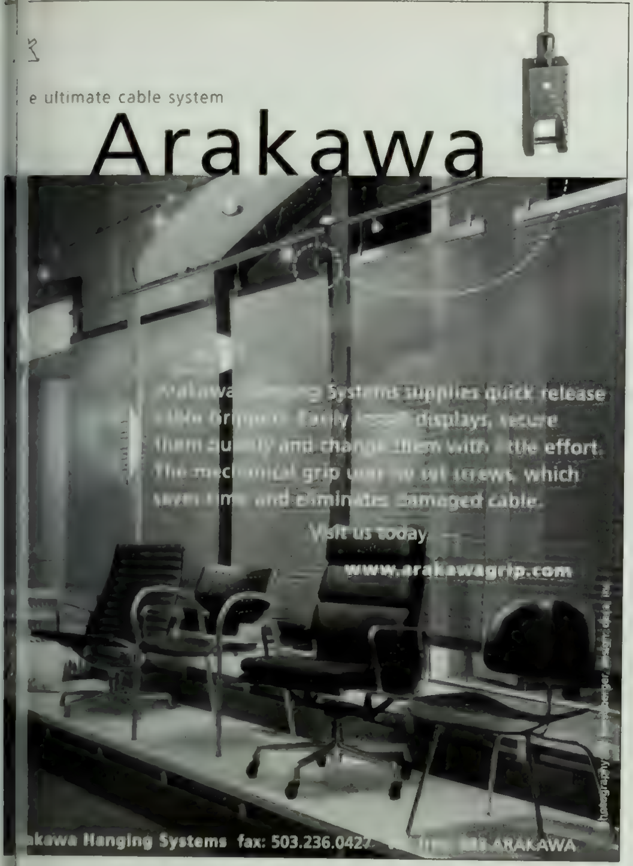
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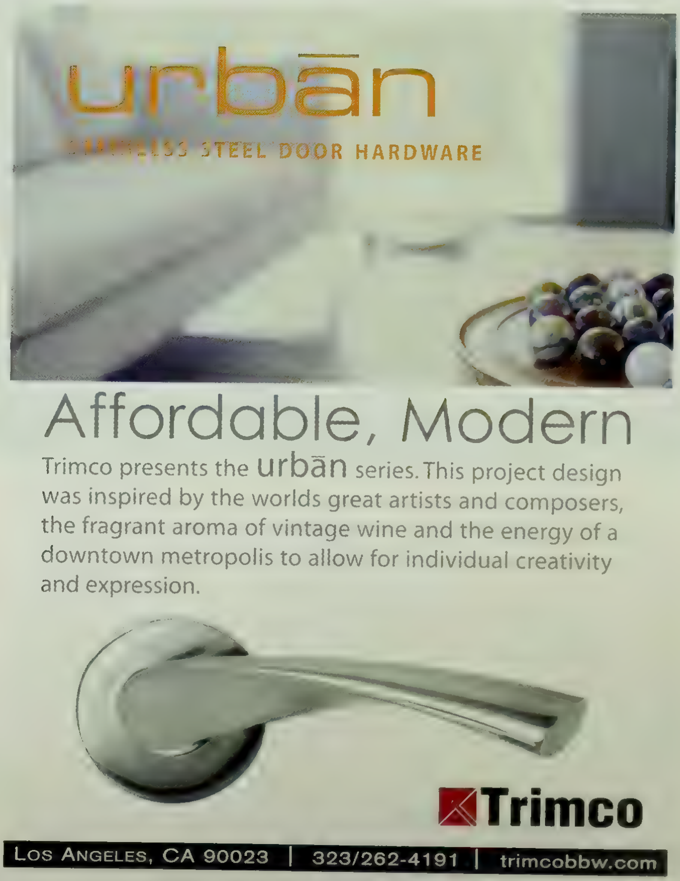
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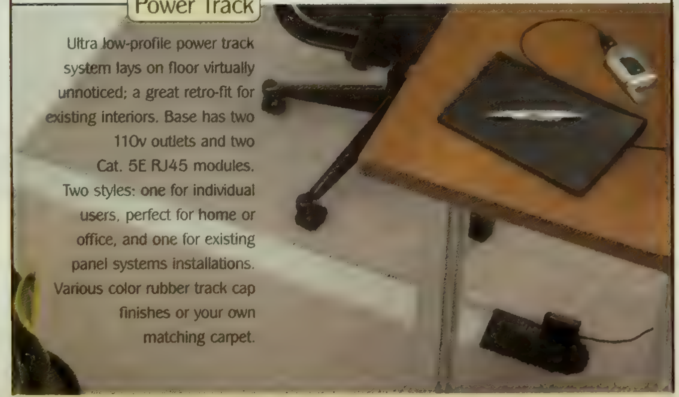

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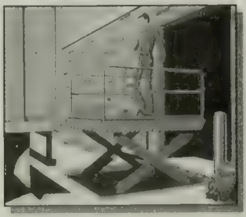

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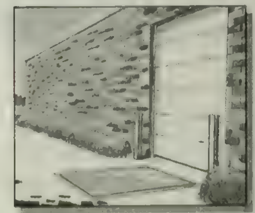

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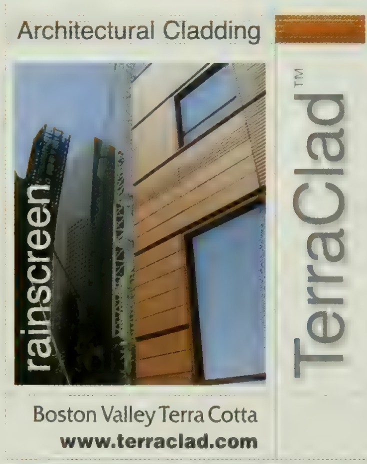

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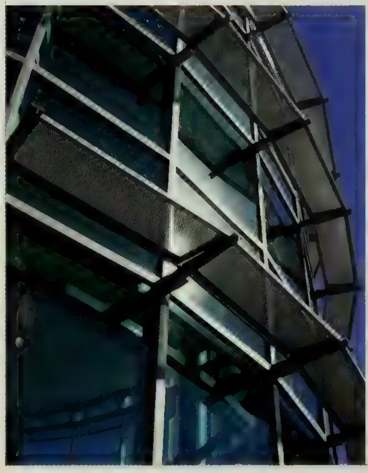

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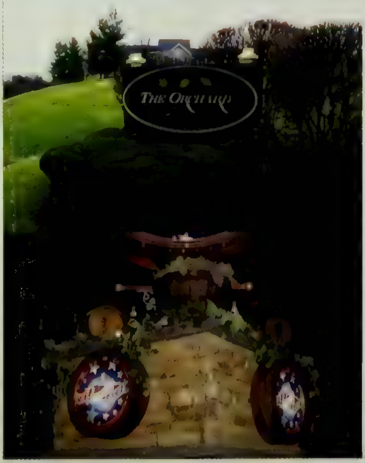

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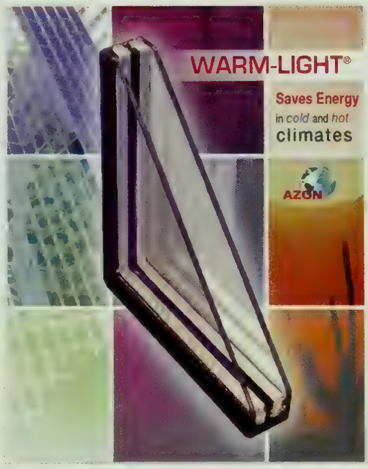

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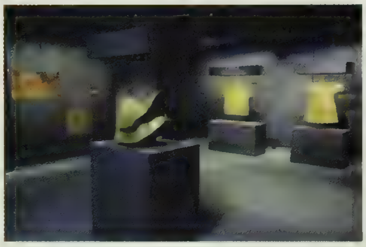

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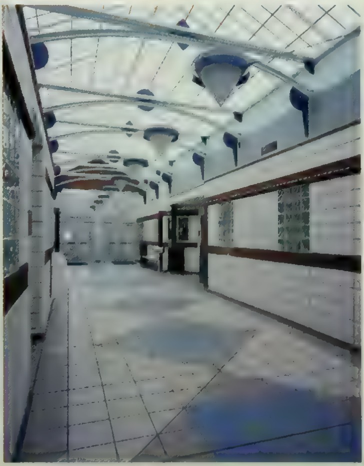

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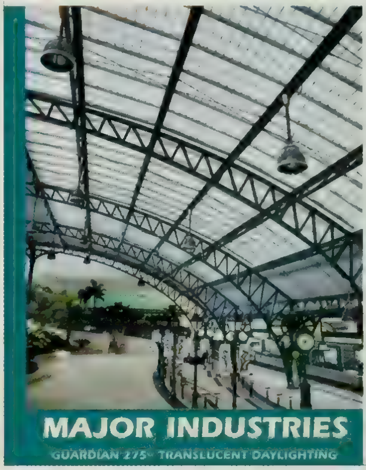

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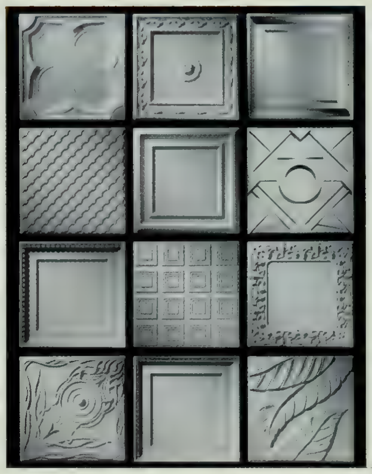

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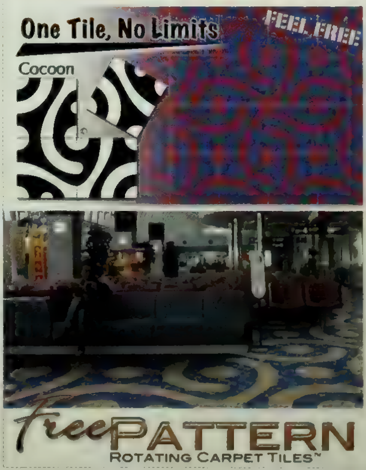

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Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples. Email gage@centurytel.net

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NobleSeal® SIS is a sheet memb
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tile and hardwood floors). SIS is
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common substrates, even gyp
concrete and radiant heating
tems. SIS can also protect thin-se
from cracking and provide wa
proofing. Visit their web site. E
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The Buffalo Stone Shower Basin is a single-piece shower floor that can be installed easily by one trade, in less than an hour. It was developed to eliminate the labor, quality, and time inefficiencies of traditional mud-set showers. Granite, marble, and limestone are available in standard and custom shapes. This natural stone basin will not leak and offers a unique drain system. Choosing a Buffalo Stone basin creates a beautiful and lasting impression for both multi-unit hospitality and residential applications.

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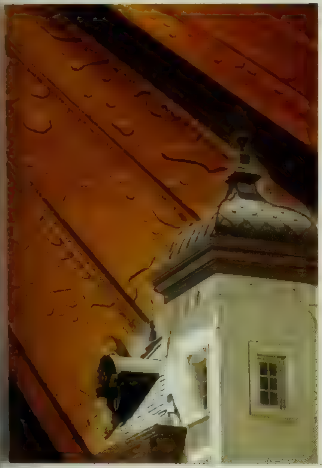
pperCraft



CopperCraft creates meticulously formed dormers, spires, cupolas and other specialty sheet metal products using copper and other quality metals. Their Old World craftsmen will work with your ideas to develop custom pieces for most any project. Their parent company, Fabral, manufactures high quality architectural metal roofing and cladding systems.

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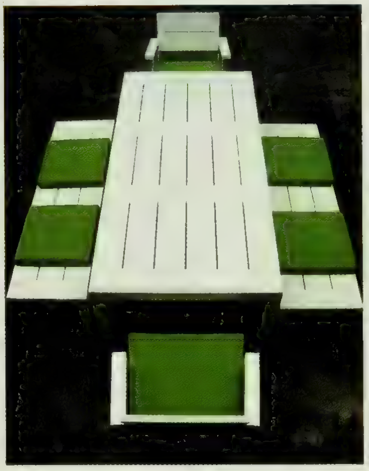
Modern Outdoor



Modern Outdoor offers three complete lines of high-style, clean-lined environmentally conscious outdoor furniture. The Modern Outdoor Collections are commercial grade products designed for use in all manner of public spaces—restaurants, hospitality, parks, resorts, hotels—yet have an aesthetic that is perfect for a residential client's backyard setting. Their products now come in ipe or polyboard, stainless steel or powder-coated steel, and a natural composite material. They offer net pricing to qualified members of the trade. View the entire collection online.

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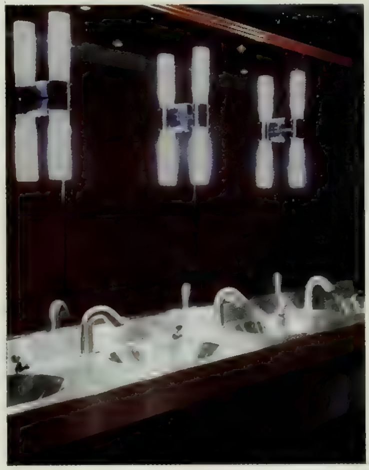
Group Washing System

Neo Metro



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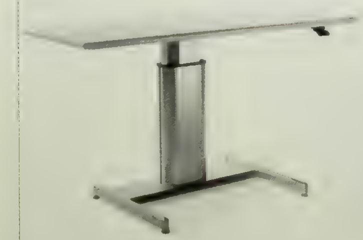
Steelcase Inc.



The Airtouch™ worksurface lifts with just a touch and feels like it's floating on air. Patent-pending Airtouch technology allows you to raise or lower your worksurface quickly (17-in.-per-second) or slowly—the choice is yours. Without electricity or power cords. So stand up and bring your worksurface with you.

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LIGHTING

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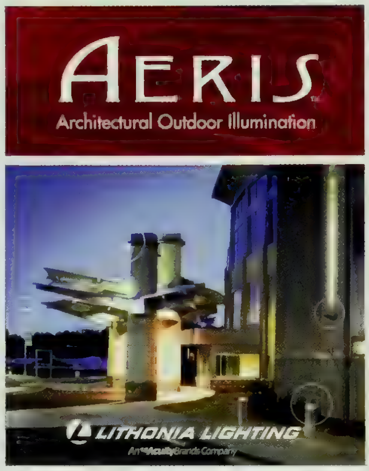
Complete Outdoor Lighting Solution

Lithonia Lighting



Lithonia Lighting Outdoor products are as versatile as they are reliable, and with the Aeris Architectural Outdoor family, innovative and inspirational designs create a complete outdoor lighting solution. Lithonia's products include: area and roadway luminaires; wall mounted luminaires; flood luminaires; and bollards.

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www.lithonia.com/aeris

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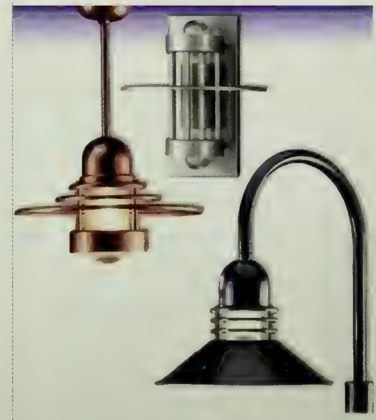
Luraline Products Company



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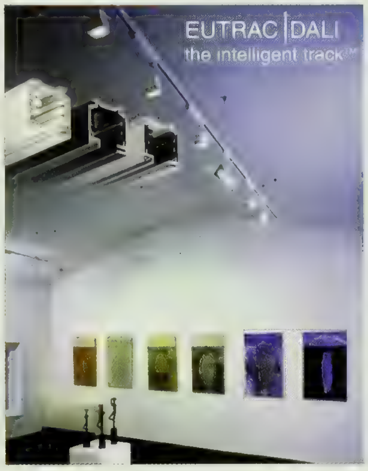
Lighting System

Selux Lighting



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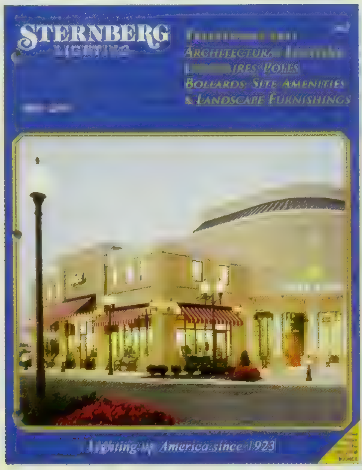

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and 1926.500, which require the
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edges. The modular, freesta
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or low-sloped roofs without pen
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www.KeeGuard.com

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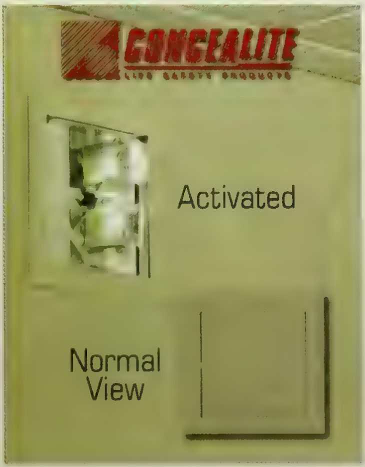
Concealed Emergency Lighting

Concealite Life Safety Products



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AIA

Notice of AIA Candidates and Convention Business Items

ıdidates for Institute Offices

ions for the Institute's next First Vice President/President-elect, two Presidents, and Secretary will be held June 8–10, 2006, at the AIA National Convention and Design Exposition in Los Angeles. If no date for First Vice President obtains a majority of the votes cast the initial round of voting on June 8–9, a run-off election will take on June 10, 2006. The Institute's Secretary pro tem, Lawrence R. good, AIA, has certified the following candidates:

irst Vice President/President-elect

). Boney, FAIA (AIA North Carolina)
all Purnell, FAIA (AIA Washington, D.C.)
C. Senhauser, FAIA (AIA Cincinnati)

ice President

e Miller, FAIA (AIA New York Chapter)
l Rodriguez, AIA (AIA Miami)

ecretary

H. Fellows, AIA (AIA Albuquerque)
R. Proffitt, AIA (AIA Central Kentucky)

ɔosed Bylaws Amendments

IA Board of Directors is sponsoring amendments to the Institute's s, which are scheduled for consideration by the delegates at the business meeting in Los Angeles on June 10, 2006. Bylaws ments require the approval of a two-thirds majority of all votes ited to be cast at convention.

s Amendment 05-A—Board Membership for Associate and Representatives to the Executive Committee

sures implemented over the years, the Institute has provided for ntation of Associates and of the Council of Architectural Compo- xecutives (CACE) on both the Board of Directors and the Executive ittee of the Institute. As a result of these actions, the following ance provisions currently apply:

Associate members of the Institute are represented on the Board by irector chosen by a committee of Associates. The Associate Director es on the Board for a one-year period, and has full voting rights in capacity during that time. (AIA Bylaws, Section 6.02; AIA Rules of Board, Section 6.11.) Upon the conclusion of his/her service on the rd, this individual, as the "immediate past Associate Director," ɔmes a member of the Executive Committee. During his/her one-year ı of service in that capacity, he/she enjoys full voting rights on the cutive Committee (AIA Bylaws, Section 6.5), but is no longer a ıber of the Board and has no voting rights on that body.

President of CACE is a Director for the one-year period of his/her idency, and enjoys full voting rights as a Board member during that . (AIA Bylaws, Section 6.04.) Upon the completion of that one- period, the individual leaves the Board and, as the "immediate past ident" of CACE, becomes a voting member of the Executive Committee. (AIA Bylaws, Section 6.5.) Like the Associate representative to the Executive Committee, the CACE representative has no voting rights on the Board of Directors.

The proposed amendment, as sponsored by the Board of Directors, would revise Sections 6.02, 6.04 and 6.5 of the Institute Bylaws to make both the Associate and CACE Representatives to the Executive Committee full voting members on the AIA Board of Directors and to effect related changes.

Bylaws Amendment 05-B—Voting Rights by Associate Directors Concerning Dues for Architect Members

Section 2.233(b) of the Institute's Bylaws currently provides: "Associates and International Associates may not vote on dues for Architect members." The evident purpose of this provision is to ensure that only Architect members will have the right to vote on dues changes affecting their category of membership.

Strictly interpreted, however, Section 2.233(b) has an apparently unanticipated consequence—it prevents the Institute's Associate Director from voting (as a Board member) on Board actions and (as a delegate-at-large) on convention actions having to do with Architect dues. It similarly restricts the Associate representative to the Executive Committee from voting on Architect member dues in actions before that body. Because neither of these positions existed at the time the relevant Bylaws language was adopted, there seems no reason to think that its adoption was meant to cause this result. Moreover, the language not only appears inequitable on its face, but may even be seen as interfering with these individuals' fiduciary duties as Board and/or Executive Committee members to weigh in on dues-related matters.

The proposed amendment, as sponsored by the Board of Directors, would revise Section 2.233(b) of the Institute's Bylaws to eliminate the restrictions described above.

Resolutions

The delegates at the AIA 2006 National Convention and Design Exposition will be asked to consider the following resolutions, which require approval by a majority vote:

06-1 Full Function Electronic Documents for All Firms, Small and Large
06-2 Recognition of Newly Licensed Architect Members
06-3 Appreciation of Retiring Members of the Council of Architectural Component Executives
06-4 Appreciation to Retiring Executive Committee and Board Members
06-5 Appreciation to the Host Chapter
06-6 Appreciation to Convention Committees
06-7 Appreciation to Exhibitors
06-8 Appreciation to Kate Schwennsen, FAIA, and Barry Jones, AIA

For candidates' statements and the full text of the proposed Bylaws amendments and resolutions, visit the AIA Web site at *www.aia.org*.

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The Authority is now accepting proposals and qualifications from architectural firms to address various blocks along the Atlantic City Boardwalk (entailing rehabilitation, new design and preservation) as part of this ongoing revitalization effort. Designs must be in conformance with the *Design Standards for the Atlantic City Boardwalk* (visit www.njcrda.com/ac_boardwalk.html).

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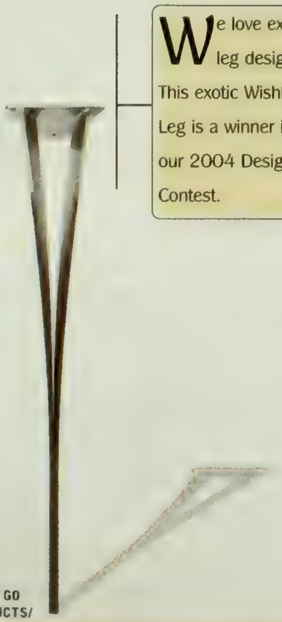
A Wish Come True!



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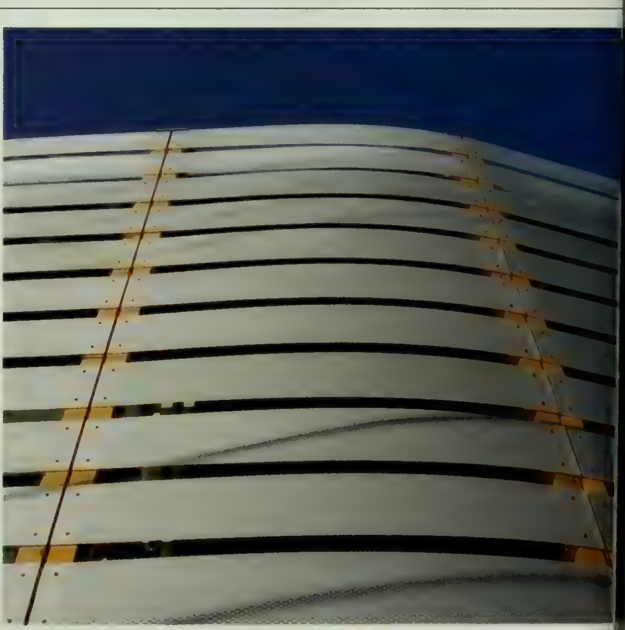

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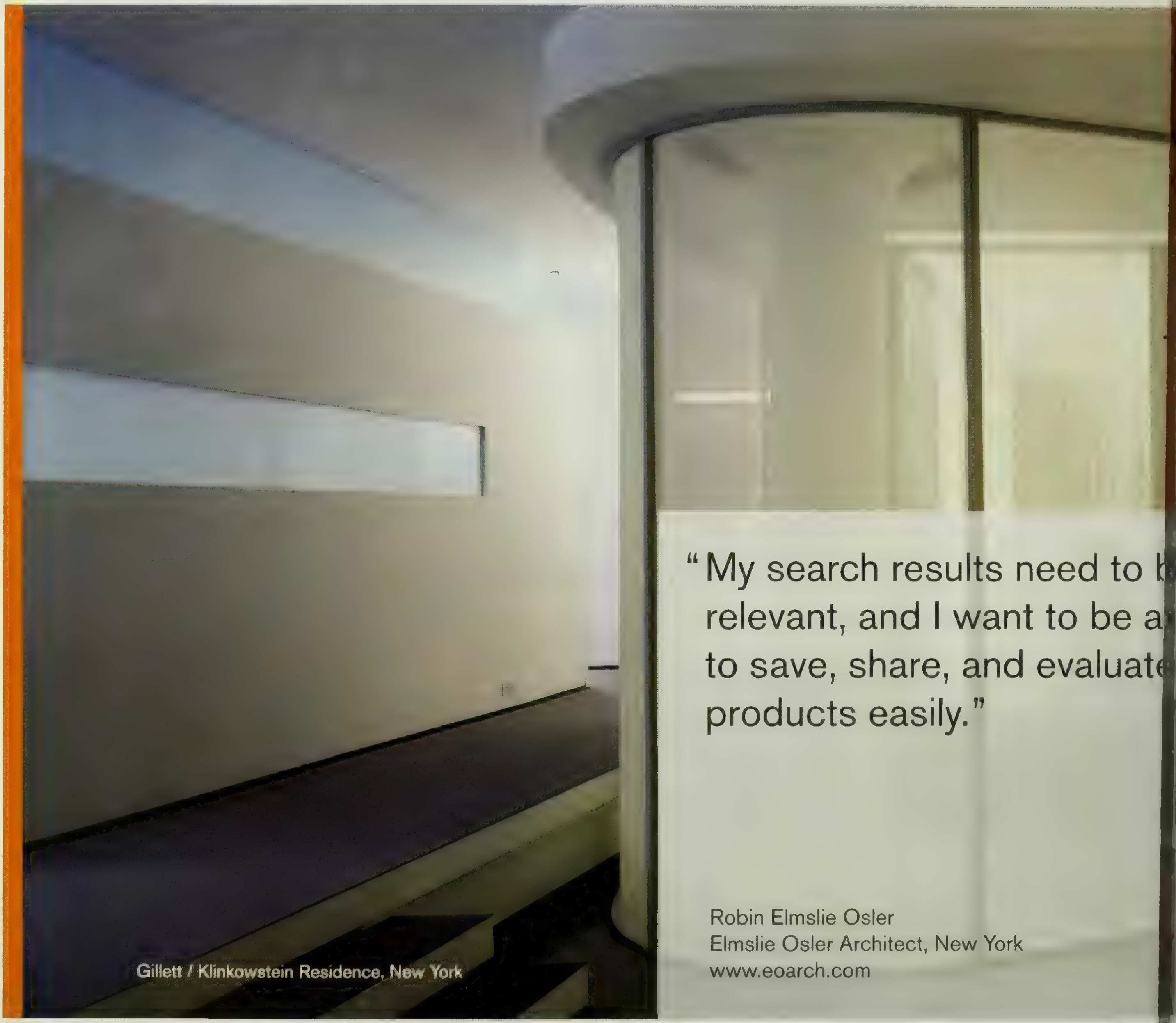

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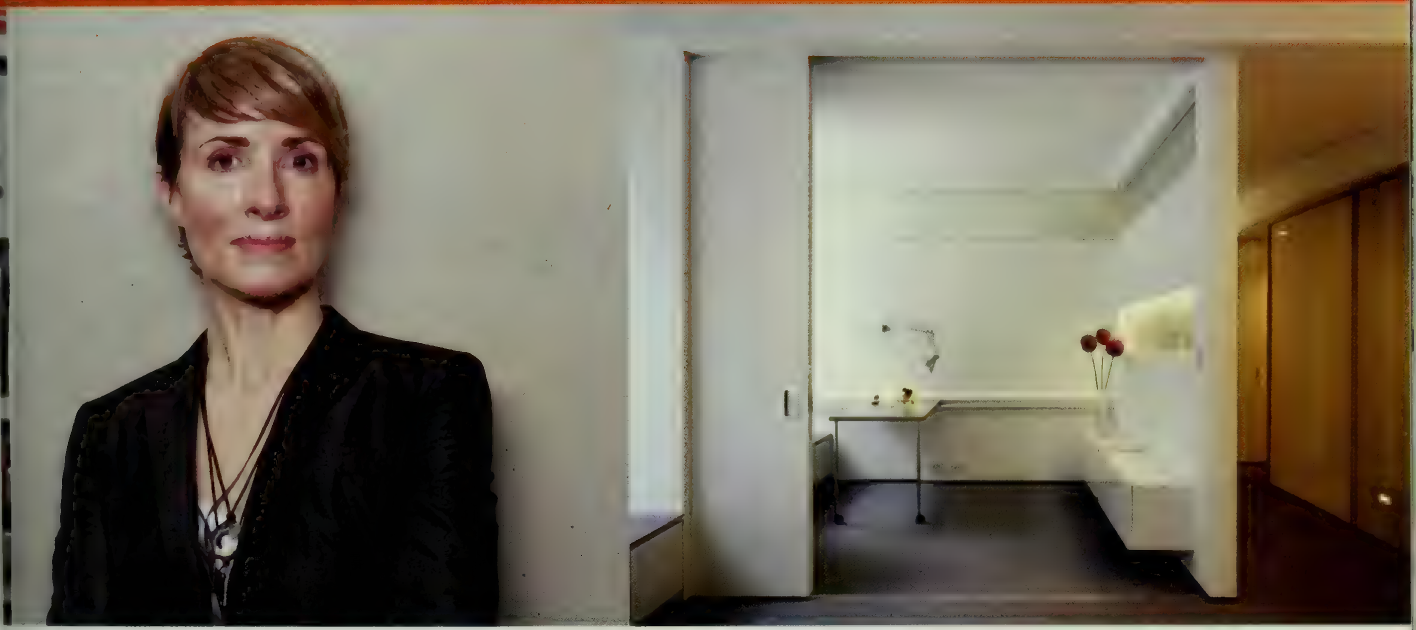

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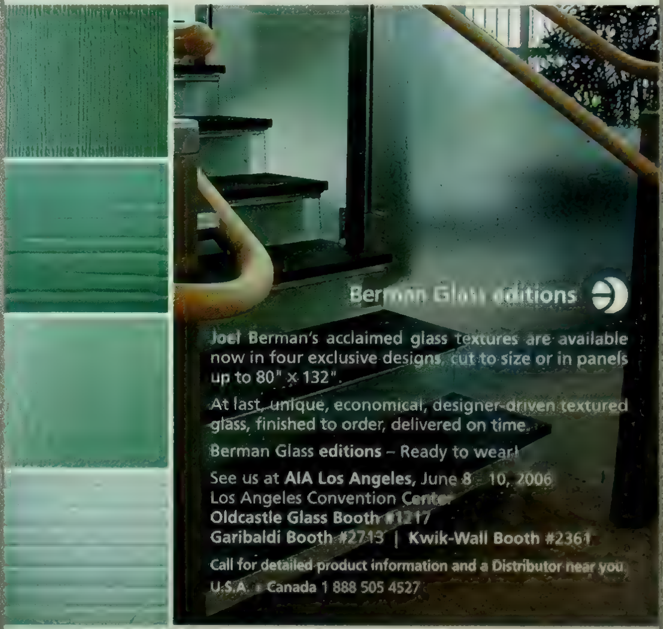

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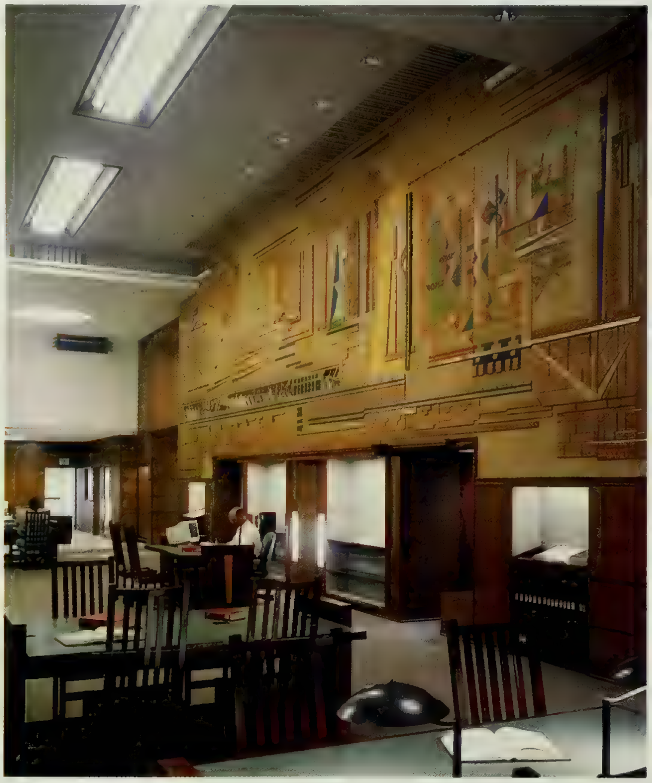
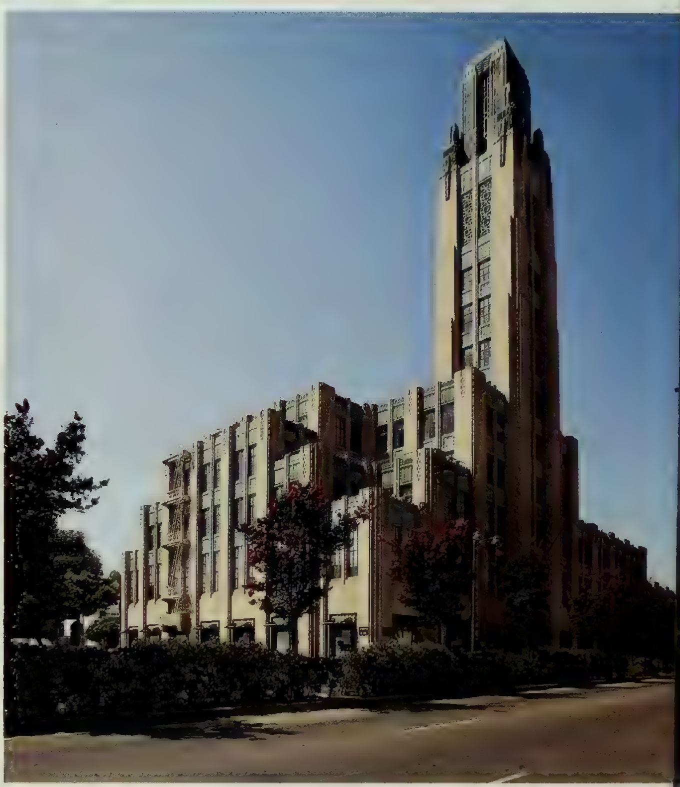
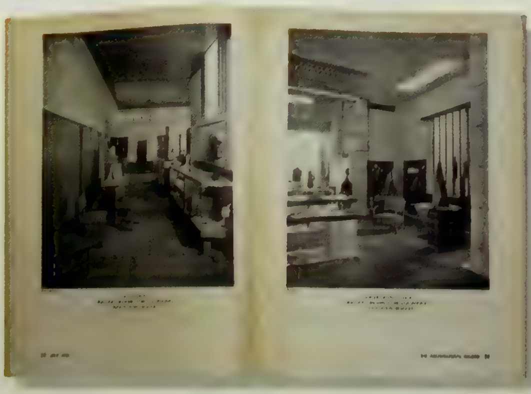




Legal minds inhabit a landmar

The library reference desk on the first floor (above) occupies the room that ARCHITECTURAL RECORD featured in 1931 (below). The building sits on Wilshire Boulevard (above right), miles from commercial downtown L.A. It was the first department store of its kind to build on a suburban site that necessitated a parking lot.



According to Ronald Altoon, of the firm Altoon + Porter Architects, the Bullocks Wilshire Department Store building, a prominent Los Angeles Art Deco landmark completed in 1928, is a logical choice to house the many functions of Southwestern University Law Schoo including a 92,000-square-foot library. "The Bullocks Wilshire building was designed to hold merchan dise from the ground up, but to exhibit artwork from the ceiling down," says Altoon about the Parkins and Parkinson structure. "This functions as well for retail stores as it does for libraries." Both readers and shoppers must gain access to items that are stored within reach on racks or shelves, while the artwork can be located above, closer to the ceiling.

ARCHITECTURAL RECORD featured photographs of the Men's Shop in 1931, with an inter designed by Jock D. Peters. Endless pages of legal volumes now occupy this space on the west side of the ground floor, where erstwhile shoppers sought the finest in cufflinks, trousers, and ties. In addition to the library, the building now also houses classrooms, facu offices, administrative services, seminar rooms, a gym, a courtroom, an advocacy center, and a cafeteria. These functions occupy the basement to the fifth floor, leaving the tower vacant. To preserve the legacy of the 230,000-square-foot building, the architects listed the original room functions for the Cultural Affairs Commission of L.A. on all documents. Therefore, the Trial Advocacy Court Room was labeled "Ladies Shoes," since the courtroom replaced that part of the store. The labeling system caught on with the new tenants. "Toda when you come into the library and ask, 'Where might I find books on international law?,' y will be told 'Second Floor Lingerie,'" says Porter. The architects were pleased that the proj gave Southwestern's law school an architectural identity, while the extravagantly designed store is now preserved for legally minded scholars and L.A. Art Deco fans alike. *Sarah Co*

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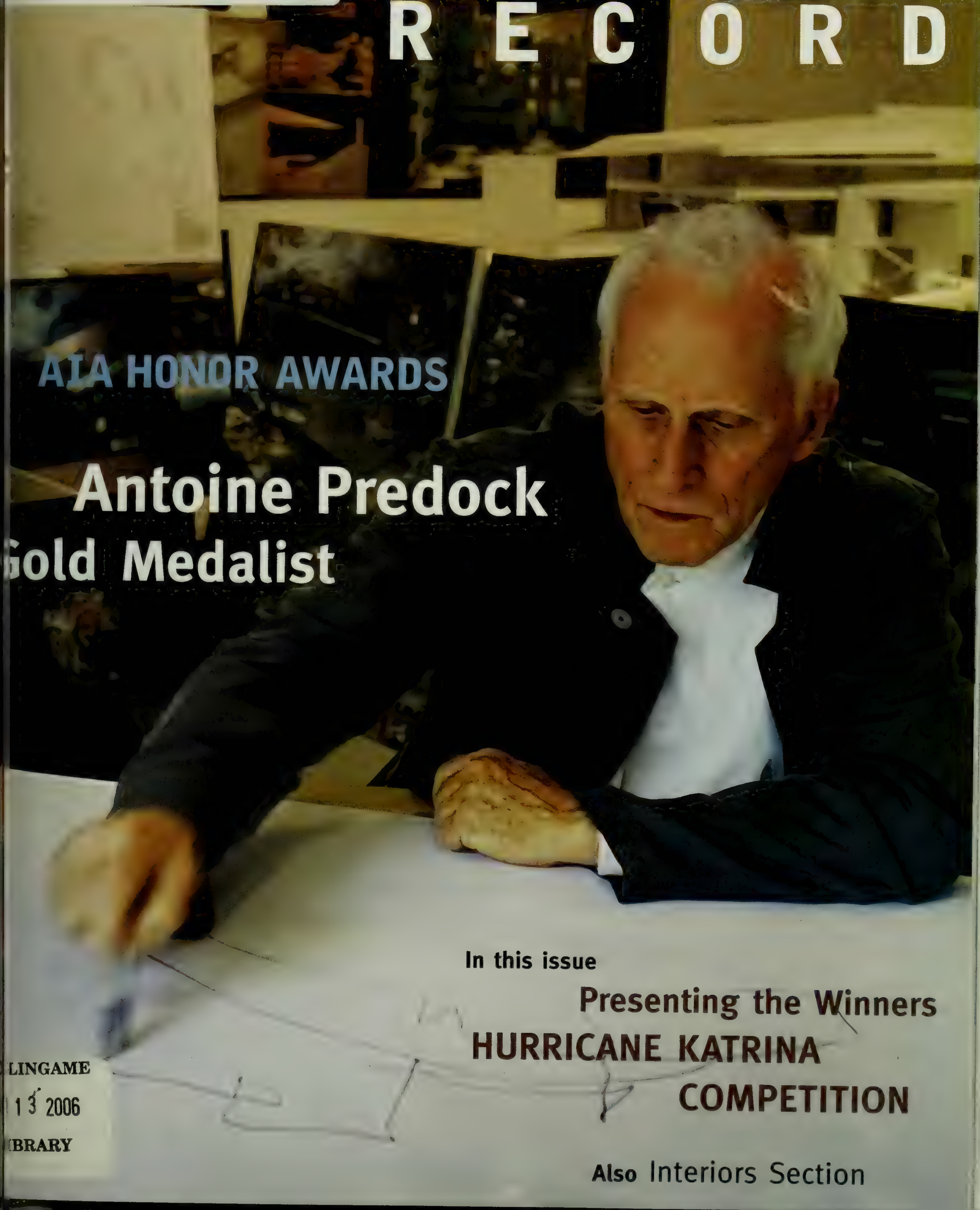

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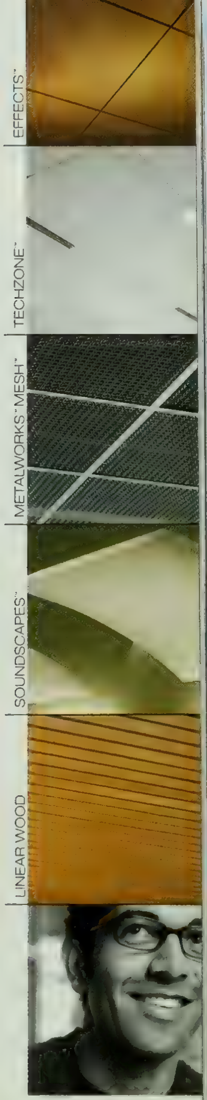

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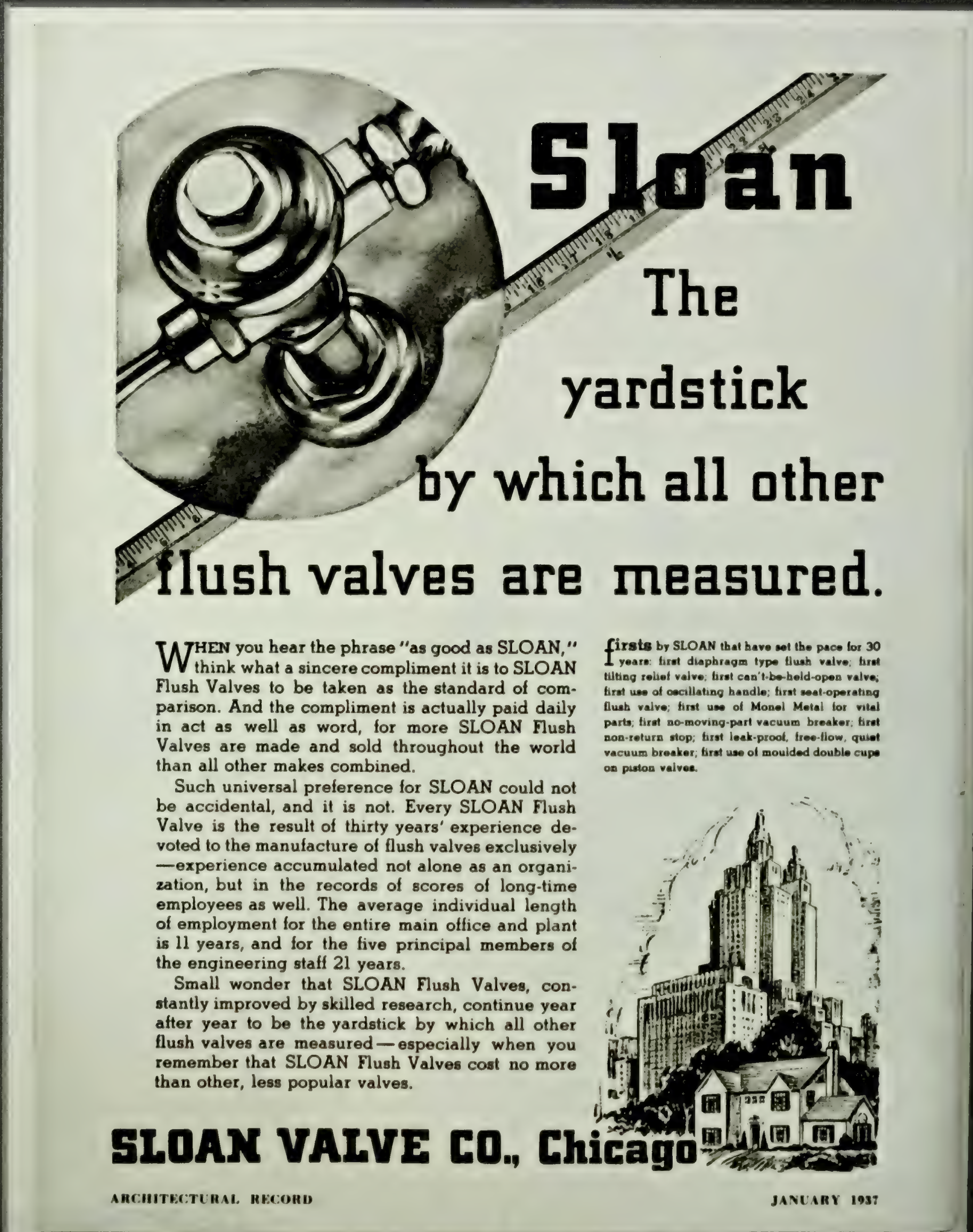

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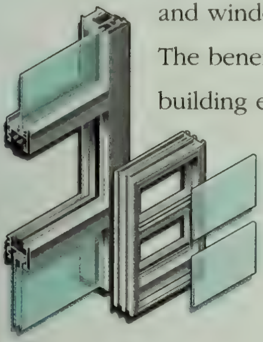

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On the Cover: *Antoine Predock in his Albuquerque studio. Photograph by Robert Reck*
Right: *Winning entry for Designing the Future of New Orleans competition, by Eight, Inc. Image courtesy Eight, Inc.*

06.2006

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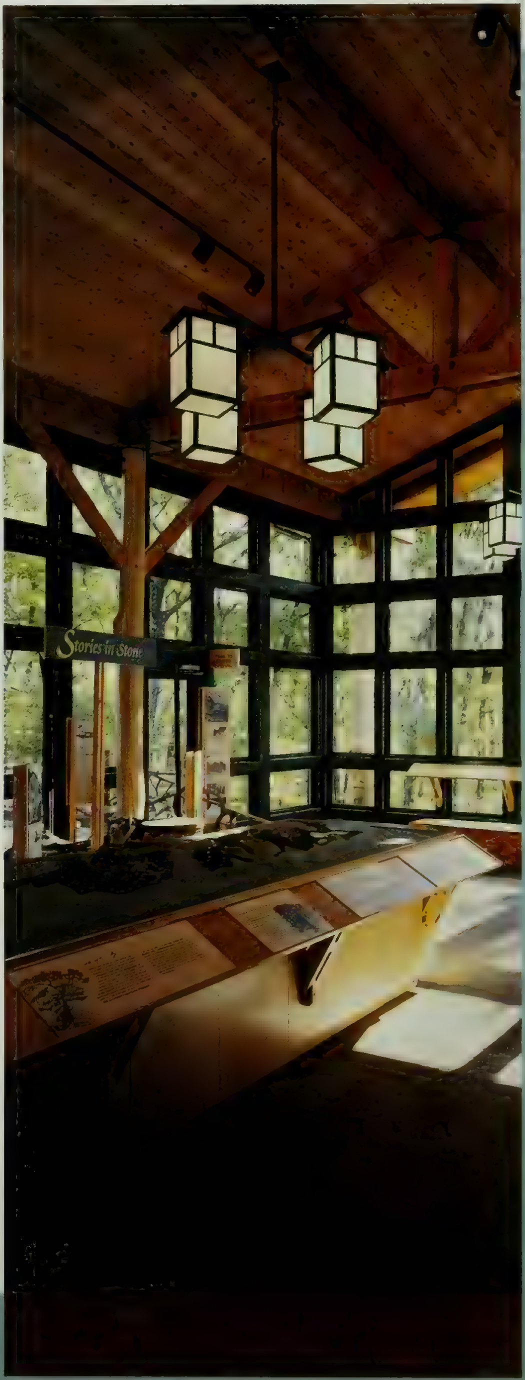

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What Might Have Been

Editorial

By Robert Ivy, FAIA

Standing in the construction dust of the megasite near the roaring heart of the city, watching the massive building rising from the scaffolding, then surveying the scene in relation to the urban core, the omparison is inevitable: Beijing is getting what New York should have built: he long-awaited CCTV headquarters.

While the fate of the 16 acres in New York has received an apparent eprieve (developer Larry Silverstein has accepted a deal in which he has owed out as the developer of the Freedom Tower, while continuing to oversee s construction and hoping to commission four other towers by prominent rchitects), the overall prognosis remains dour. Lower Manhattan lacks the ffice market to fill the intended towers, including Governor Pataki's much-aunted Freedom Tower. And Silverstein's recently completed 7 World Trade enter, a LEED-qualified, simple sheath of a building designed by SOM, mains woefully, predominantly vacant. Meanwhile, the WTC Memorial, to cast into the footprints of the former Twin Towers, is stuck in neutral, as its sts have escalated to almost $1 billion and leadership has vacillated. Despite flurry of recent announcements, the chances for excellence are waning in a ab bag of lost hopes and compromises across the site.

Shift the scene to China. The CCTV headquarters, an immense ructure located between Chang An Boulevard and the Third Ring Road, on comparable site to the World Trade Center in Beijing's new Central usiness District, is rising from the ground. Designed by the Office for etropolitan Architecture (OMA) in Rotterdam, this paradigm-busting ilding confronts modernity with a sizzle, literally hanging in the air above e street, organized in a loop of rhomboidal tubes that defies standard engiering and conventional thought.

Rem Koolhaas, who heads OMA, has written about CCTV. In s customarily confrontational style in a publication called Content, *he nounces CCTV's seminal role: "It is not only this building which will be ilized with incredible and outrageous effort, it will also liberate hundreds of ier architects, good and bad as usual, to be more experimental and to surder less to a dictatorship of gravity." Structure becomes polemic.*

In CCTV's case, Koolhaas's assertions do not constitute hyperbole. Central to the realization of CCTV's and OMA's ambitions, this complex structure, which rides above an active seismic zone, demanded the most sophisticated engineering on the part of Arup, the consulting engineer. In addition to a foundation that floats above the shifting earth, the engineers and architects at OMA, including Koolhaas's partner in Beijing, Ole Scheeren, devised a structural diagrid that varies with the underlying forces affecting the building; the resultant tube structure provides a rational diagram of physical realities as well as a dynamic web that invigorates the exterior.

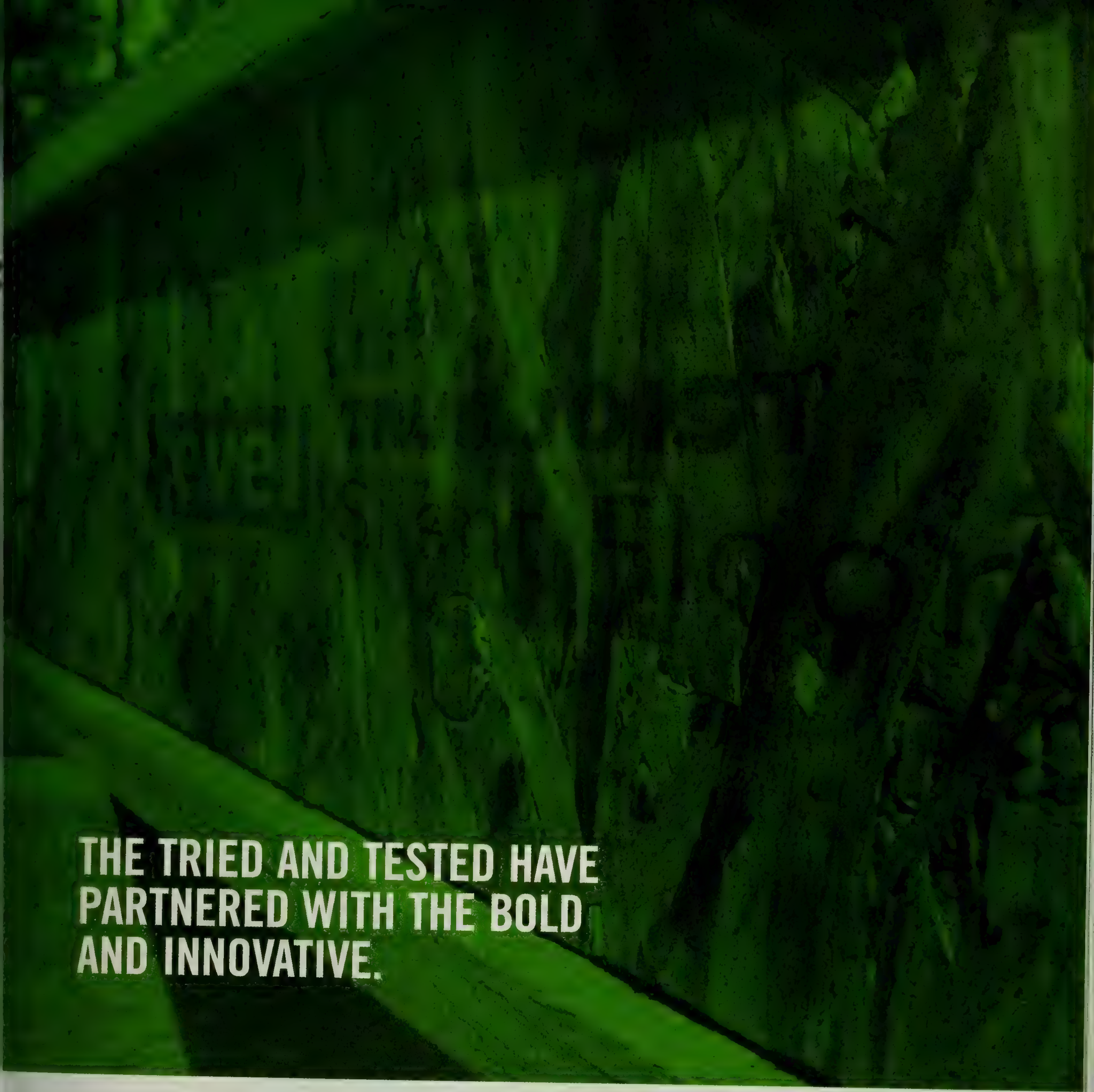
Ingenuity also enlivens the interior of the iconic shell. In a creative, programmatic variation, OMA designed a television city within the city, linking theaters and studios and management into an interwoven whole, with parallel, secure opportunities for public visitation and viewing. The striking, resultant loop functions as the technical heart of a nationalistic enterprise that plans to expand its broadcast offerings dramatically in the coming years. An adjacent structure, TVCC, provides a social hub, with a hotel, theaters, shopping, and recreation.

Never intended to be the world's tallest structure, the primary building nevertheless encompasses 400,000 square meters (4.32 million square feet). The total program includes a plan for the Central Business District with provisions for preservation of historic fabric, as well as parkland. The tower, in this case, does not tell the entire story.

If it seems easy to slam New York for missing the opportunity that Beijing seized, remember that two political systems created two cities, and the resulting structures reflect their differences. The New York story remains a messy one, fraught with politics, high emotions, political ambitions, and inertia in the face of competing interests. In China, the images of Koolhaas and his clients reflect a smiling unity that knows it can accomplish the most difficult tasks, if at a price that contemporary democracies refuse to accept. Standing on the site, however, provokes an inevitable lament, "How did China get what New York should have built?"

Robert Ivy

introduction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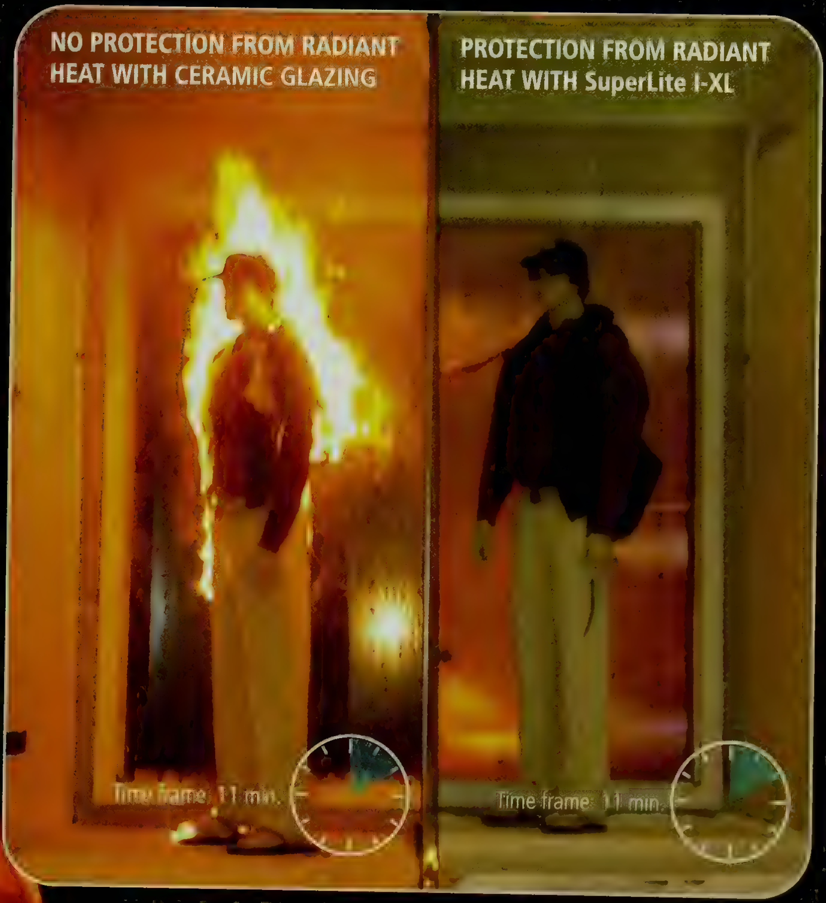
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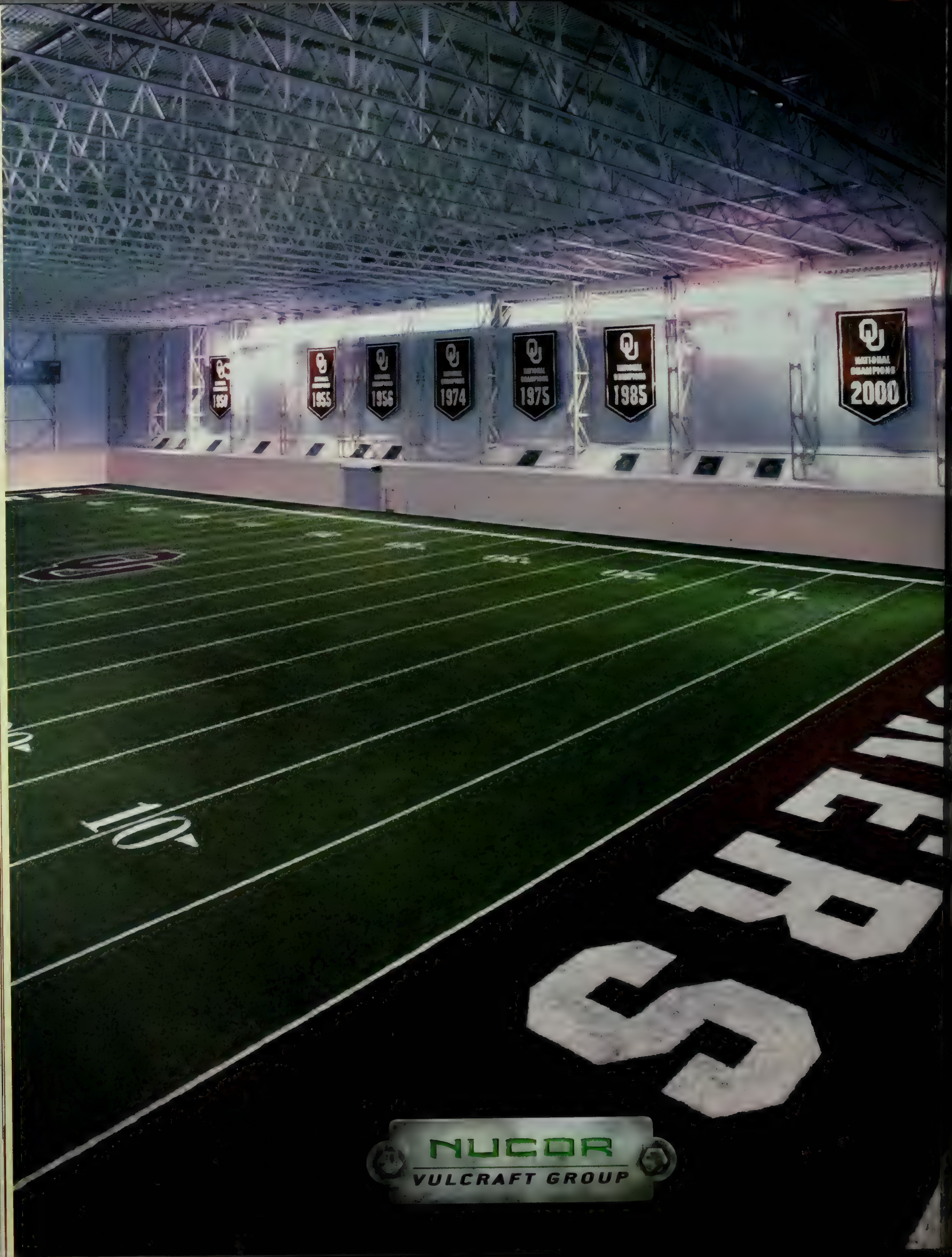

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g, or, as is also likely, the project
ns way over budget or takes much
nger than anticipated and, in the
eantime, another major hurricane
s this area and again overtops or
eeches these levees? Are the rest
us taxpayers on the hook for fund-
g the flood-insurance claims that
l result? When will somebody in
charge figure out that rebuilding in areas already well below sea level on sinking land is basically a really dumb idea?

—Bill Prelogar, Jr., AIA
Via e-mail

Is this justice?

I am surprised and disappointed by your news coverage of Richard Rogers's involvement with the Javits Center expansion project [April 2006, page 33], which seems to suggest a positive outcome from his continuation on the job. From my perspective, Rogers's decision to dissociate himself from the movement for justice in Israel-Palestine is not only a deep embarrassment to himself but also a powerful blow to the profession of architecture as a whole. Far from demonstrating that architects with the best design credentials (which Rogers undoubtedly has) deserve prestigious commissions, Rogers has shown that even the most highly regarded architects (which Rogers undoubtedly is) will subjugate themselves and their consciences to any significant client at the first sign of displeasure.

Ironically, the meeting of Architects and Planners for Justice in Palestine—which didn't even need to adopt a formal platform to be denounced by Rogers's clients—ruffled far fewer feathers in England, where the meeting was held, or in Israel, where you'd think people have more reason for concern. The New York overreaction to the APJP meeting was outdone only by Rogers's pathetic disavowal of the discussion, which might actually constitute progress in the conflict. As for the New York power brokers who called Rogers onto the carpet, what's next—a blacklist of all architects who choose to speak their consciences? And can I, as a New York City–born Jewish American who thinks that Palestinian people deserve full protection of their human rights and that the Israeli occupation of their land is a profound violation of international law, ever hope to design a public building in my hometown without facing a political inquisition?

Otherwise, please continue to keep us informed of the developments in the profession, and thanks for a consistently refreshing magazine.

—Raphael Sperry, AIA
President, ADPSR
San Francisco

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Communing without nature

Your April issue's Record Houses was another stellar roundup of eight gorgeous, well-crafted, high-end houses, that, as Robert Ivy notes in his editorial [page 21], "reflect the deep-seated desire for dwellings with a symbiotic relationship to the out-of-doors that is transparent and in harmony with nature." One can trace this desire from Italian Renaissance villas to English country estates, and then over 300 years of settlement in North America. What is problematic is that your most recent coverage really translates this desire into so many austere boxes whose only relationship with nature is that they exist in it. The lone house in a wilderness clearing is a settlement pattern that most of the world can no longer support. Rather than so many reinterpretations of the Villa Savoie, perhaps your next offering could inspire us with new houses that are located in the messy, scarred, and challenging world of our cities, towns, and suburbs—where most new residential construction occurs. Residential architecture, in the form of the single-family house, has been the feature building block of American urbanism, and has always had the capacity to contribute to a streetscape or neighborhood. Even Corbu did a half-dozen town houses! Surely the subscribers to your magazine could answer the call to illustrate such a volume.

—Christopher Pizzi
San Francisco

A return to architecture

Thanks for another great Record Houses issue. It occurred to me that what made these particular houses noteworthy was the fact that they bucked the trend toward computer generated architectural imagery. The designs would probably not stand out as computer renderings—against the nurbs-driven madness of Form Z and other programs—but, in the end, they work spectacularly as buildings. I hope this portends a return to architecture, leaving Common Gateway Interface to Hollywood.

—Tom Marble, AIA
Los Angeles

An *A* for effort

Morphosis's Science Center School in Los Angeles [May 2006, page 132] is a very interesting building that made me rethink my perceptions about school design in general. This is not your typical elementary school—it is devoid of bright colors and origami decoration. At first glance, the choice of materials (concrete, metal lattices, and welded-wire panels) may appear cold and the scale of the structure may overwhelm a typical six-year-old. However, I am open to new ideas on how educational facilities can be designed to produce positive results Perhaps a school should be a blank canvas where the students themselves become vibrant colors and bring life to the space. Thom Mayne FAIA, of Morphosis may be on the road to an innovative design solutio that could redefine how we build schools in the future. Some years from now we may find out whether not this type of setting leads to better results than the cookie-cutter schools most of us attended.

—Adrienne Batson-Cooper,
Assoc. AIA
Brooklyn, N.Y.

Congrats

I wanted to comment on Robert Ivy's wonderful editorial, "Keep the Pressure On" [March 2006, page 17]. It was an impressive and bold piece of writing that is long overdu I congratulate him.

—Liane Nouri
Via e-mail

Write to rivy@mcgraw-hill.com.

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the game is played for our amusement. And then he leaps; transcending the plane of
at is expected. The contest of intellect is won, emotion prevails soundly over reason.

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June 2006

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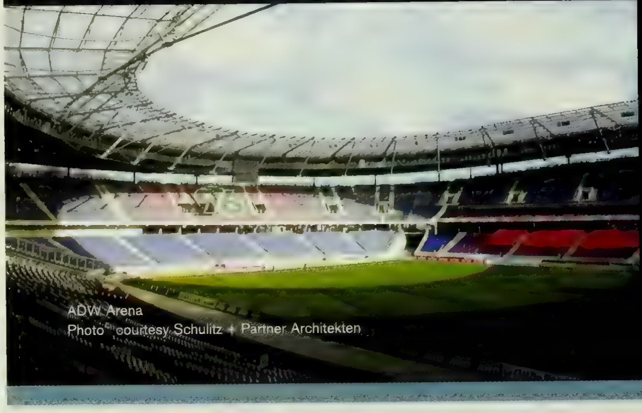
AIA 2006 Honor Awards

Clean lines, restrained use of materials, and sensitivity to environment and surrounding neighborhoods mark this year's AIA Honor Awards. It's a sublime mix, from the Gold Medalist, to the 25 Year Award winner, to the Firm of The Year winner to the 11 architecture, 11 interior design, and eight urban design honorees.


ADW Arena
Photo© courtesy Schulitz + Partner Architekten

Building Types Study

Stadiums and arenas demand bold, courageous ideas from those who design them. Today's most exciting stadiums and arenas are being built in Europe and Asia, where the competitive spirit spurs innovation. This month, 10 projects illustrate how competition fuels creativity in the U.S. and abroad.

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21C Museum Hotel
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Interiors

A hotel lobby in Louisville, Kentucky morphs into a gallery, a pathway to a New York City skyscraper's pinnacle is part of the show, and in Seattle, a restaurant and notable adaptive reuse project create a gossamer interior landscape just beyond the rough brick façade.

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Chinatown Design lab
Image courtesy eskyiu

Archrecord2

The principals of eskyiu use design and technology as tools to engage the public in shaping our environment. For Josh Galloway, staff architect for Richmond, Virginia's Better Housing Coalition, creating better neighborhoods has built him a rewarding career.

House of the Month

Three elegant prefab houses combine to grace our site this month. Modulars I, II, and III, designed and built by Studio 804, an independent nonprofit affiliated with the University of Kansas School of Architecture and Urban Design were created entirely by the students of Professor Dan Rockhill.

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Record Reveals: Los Angeles

Visit archrecord.com to experience a special site dedicated to the unrestrained, talented, and innovative architects who call Los Angeles home. With podcasts, interviews, and an informal design guide, the site gives you an inside look at the people who make L.A. a nucleus of thought-provoking design.

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Vitra Design Museum *Frank O. Gehry Architect* Photo courtesy of Sto Corp.

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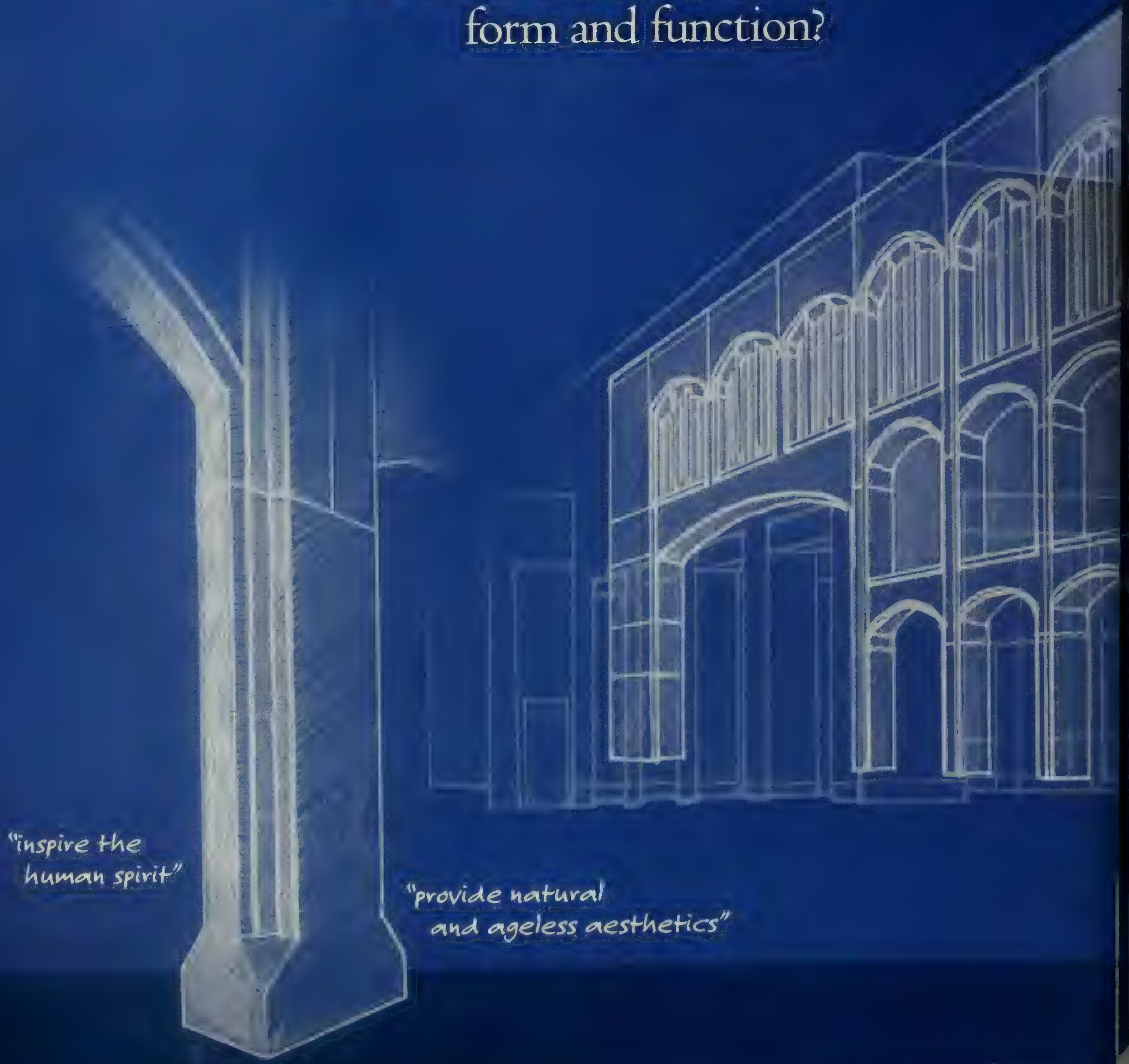

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Record News

Highlights

p.42 **WTC Memorial price may reach $1 billion**
p.46 **New Orleans planning team in doubt**
p.50 **Israel Museum expansion design**
p.53 **National Trust names most endangered**

Author Jane Jacobs dies

Writer and activist Jane Jacobs, who was best known for her book *The Death and Life of Great American Cities* (1961), a scathing critique of mid-20th-century urban-sm, died on April 25 in Toronto. She was 89.

Jacobs, from Scranton, Pennsylvania, moved to New York City n 1934. She took classes at Columbia University and worked or newspapers and magazines before becoming an editor at *Architectural Forum* in the 1950s. While there, she began to explore ubjects like the polarization of rich nd poor in cities, the inhumanity of ublic housing, and the monumental-y of government projects. In 1959, he took a leave of absence to write *Death and Life*, which became one of istory's most influential books on urban planning. In the book, she critiqued automobile-centric urban planners like Robert Moses, whose transportation and public-housing projects destroyed neighborhoods and transformed the New York City region.

Commenting on her era's grand, utopian planning ideals, she wrote in one passage, "To approach a city or even a city neighborhood as if it were a large architectural problem capable of being given order by converting it into a disciplined work of art is to make the mistake of substituting art for life."

In contrast, Jacobs praised the vitality of historic, mixed-use, pedestrian-friendly areas like her beloved Greenwich Village, and SoHo. Her writing and activism helped engender an appreciation of these organically developing neighborhoods and spared countless others from the threat of urban renewal. Thanks largely to her efforts, Moses's plans to build a highway through SoHo and high-rises throughout much of Greenwich Village failed. Jacobs was also a strong supporter of community-based planning, and her influence helped lead to the establishment of many preservation, healthy-city, and planning groups.

Longtime *Boston Globe* reporter David Warsh summed up Jacobs's influence in a 1993 article: "Probably no single thinker has done more in the last 50 years to transform our ideas about the nature of urban life."

Not all agreed with this assessment. Moses, whose battles with Jacobs were legendary (she is said to have once hit him with her purse), dismissed her as an uneducated housewife with little knowledge of architecture and planning. Lewis Mumford said that she displayed "aesthetic philistinism with a vengeance." Indeed, Jacobs never earned degrees in architecture or urban planning, but she was often praised for basing her ideas on experience and observation rather than abstract theories.

The breadth of her subjects was wide. Her other books tackled topics such as city planning, politics, sociology, economics, and morality. They include *The Economy of Cities* (1969); *The Question of Separation* (1980); *Cities and the Wealth of Nations* (1984); *Systems of Survival (1992); The Nature of Economies* (2000), and *Dark Age Ahead* (2004).

Jacobs, her husband, architect Robert Hyde Jacobs, and two sons moved to Toronto in the late 1960s to protest the Vietnam War, and they lived there since. *Sam Lubell*

Port Authority and Silverstein settle lease at Ground Zero

fter weeks of stalled negotiations, ew York developer Larry Silverstein late April accepted a deal in prin-ple with the Port Authority of New ork and New Jersey regarding evelopment rights at Ground Zero. nder the agreement, Silverstein ill develop three of the five build-gs planned for the World Trade enter site, but will cede rights to he 1,776-foot Freedom Tower, hich he will still build.

The developer also gave up ghts to Tower 5 (which will be cated on the northeast corner of e site), much of the $2.9 billion in surance proceeds he is expected collect, and millions of dollars in x-free New York State Liberty Bonds. Silverstein obtained his lease to the towers from the Port Authority just two months before the September 11 terrorist attacks.

"Failure is not an option here. We need to get this done now," said Silverstein at a press conference. "We owe it to the people of New York, who are tired of seeing a hole in the ground where the World Trade Center once stood."

Silverstein and the Port Authority had been discussing the deal for several months. New York Governor George Pataki had set a March 14 deadline for the parties to resolve the issue, but state officials walked out of talks just before the deadline.

A recently released New York City report claimed that Silverstein would likely run out of money and default on his lease after building only two out of Ground Zero's five planned towers. Silverstein spokesman Bud Perrone called the analysis "misleading and at times outright wrong."

It has now been almost five years since 9/11, and construction is still barely underway at Ground Zero. Construction work on the Freedom Tower did begin at the end of April, within days of the agreement. *S.L.*

Freedom Tower construction under way in April.

REBUILDING LOWER MANHATTAN

7 World Trade Center completed, first major development at Ground Zero

Almost five years after the attacks of September 11, the first major project at Ground Zero is about to open. Seven World Trade Center (7 WTC), a 52-story tower designed by Skidmore, Owings & Merrill (SOM) and developed by Larry Silverstein, was at press time set to be completed on May 23. It is located just north of the World Trade Center site.

The 1.7-million-square-foot, $700 million building stands out downtown largely because it does not stand out. Its glass curtain facade is made of ultra-clear, low-iron glass, making it much lighter in color than the area's surrounding buildings. Behind the glass, curved stainless-steel spandrels reflect skylike blue light back onto the windows. The relatively narrow building was pulled back from its eastern property line while adhering to the street grid, which gives it an irregular-shaped floorplate. The setback allowed room to build a small but lovely park, designed by Ken Smith. This acts as an entryway to the rest of the Trade Center site, which unfolds in front of it in dramatic fashion.

Like the 1,776-foot Freedom Tower, also designed by SOM and developed by Silverstein, 7 WTC has a concrete base, in this case to provide security, and to house a Consolidated Edison electrical substation and the building's mechanical systems. The 11-story base's surface is fitted with an installation of reflective metal panels designed by New York artist James Carpenter with SOM. During the day, the surface reflects outside light, and at night it is animated by LED projections that mimic the movement of passersby. A glass ceiling in the lobby changes color throughout the day. The lobby also features an installation, with projected moving text about New York, created by New York artist Jenny Holzer.

Ground Zero's first permanent building.

Above the lobby, most floors, which are column-free and fairly lofty, are still bare because tenants will not move in until the fall. The most dramatic element is the view: Floor-to-ceiling glass reveals cityscapes on all sides. One can look down from the south side at construction on the Freedom Tower site, which recently began. To the west is construction on the Goldman Sachs building, and condominium projects seem to be going up everywhere else.

The building, the first high-rise in New York to complete LEED certification, is one of the greenest skyscrapers in the U.S. Rainwater is collected for irrigating the park and cooling the building; recycled steel was used in construction; and high-efficiency cooling, heating, and plumbing systems were installed. Daylight is provided to about 90 percent of the building's occupied space. Not surprisingly, the building also contains myriad safety features. Besides the concrete base, the building rises around a concrete core. If any exterio columns are compromised, the load will shift elsewhere. Exit stairwells are much wider than those in the old 7 WTC, and fans and vents ensure smoke won't fill these areas. Since fuel tanks for diesel generators were thought to have stoked the fires which caused the original 7 WTC to collapse on 9/11, emergency power supplies for the building have been located away from the footprint.

The project still has few tenants, a sign that Manhattan office properties are not filling as quickly as residential ones. Most tenants of the old World Trade Center signed 10-year leases when they relocated after 9/11, says Silverstei Spokesman Dara McQuillan, so they can't consider leaving until 2011. Major tenants of 7 WTC are Ameriprise Financial, China-based Beijing Vantone Real Estate, the Ne York Academy of Sciences, and Silverstein's offices. New York Mayor Michael Bloomberg has called for more residential development at Ground Zero, as have many planner and critics. But McQuillan says the Trade Center will be successful as a business complement to the area's residences, a "21st-century Rockefeller Center." Officials from th Lower Manhattan Development Corporation say that demand will increase once transportation facilitie here are completed. *S.L.*

World Trade Center Memorial cost predicted near $1 billion

According to a confidential report compiled for the World Trade Center Memorial Foundation, which had been overseeing fund-raising and construction at the memorial, the estimated total cost for the memorial and its museum (model, left) has ballooned to about $972 million. In response, the Lower Manhattan Development Corporation (LMDC), which oversees construction at Ground Zero, has insisted that the cost remain at $500 million, while Governor Pataki has formed a committee made up of local design, construction, and community leaders to guide the memorial's progress. The LMDC selected the project's designer, Michael Arad, in January 2004 and originally estimated its cost at around $500 million.

The new cost estimate was produced by project management company Bovis Lend Lease on behalf of the Memorial Foundation. Bovis's report estimates the cost of the memorial and its related museum at $672 million, and the cost of related buildings and infrastructure at $200 to $300 million.

The LMDC noted in a statement that the budget for the memorial must remain $500 million, suggesting that there might be "appropriate strategies" to build the project at that figure. It did not specify what those strategies might be.

The Memorial Foundation says the projected $672 million price for the plan was higher than anticipated because the project was more complex and larger in scope than intended, while the increased amount of construction in the area had driven up costs. A source at the foundation says that $672 million, not $1 billion, is the only relevant cost estimate, since the foundation "should not have to pay for sitewide infrastructure costs, which include structural systems, mechanical fit-out of the central chiller plant, and a police and emergency operations center."

The Memorial Foundation has thus far raised $130 million in private donations and $200 million in committed funds from the LMDC. *S.L.*

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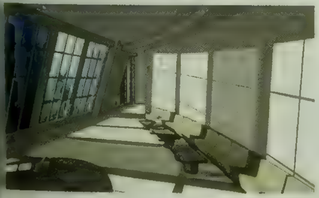

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REBUILDING LOWER MANHATTAN

Rogers, Maki to design towers at Ground Zero

Just days after beginning construction at the World Trade Center Freedom Tower, developer Larry Silverstein announced on May 3 that architects Richard Rogers and Fumihiko Maki will each design high-rise office towers at the World Trade Center site.

The architects will join a list of architectural stars working at the complex (see site plan, right). They include Daniel Libeskind, FAIA, SOM's David Childs, FAIA, Santiago Calatrava, FAIA, Frank Gehry, FAIA, Snøhetta, Michael Arad, Peter Walker, and Norman Foster. Many have wondered how all their designs will interact, since Libeskind's commercial design guidelines for the site have not yet been officially released.

Libeskind's master plan calls for five office towers, which would replace the 10 million square feet of office space lost on September 11. Silverstein had expressed an intention to hire Foster and Maki back in 2003, but Rogers is a new addition to the group. Silverstein's spokesman, Bud Perrone, says that the 2003 announcement was "less official" than the current one. Silverstein also said that the Freedom Tower would be completed by 2012.

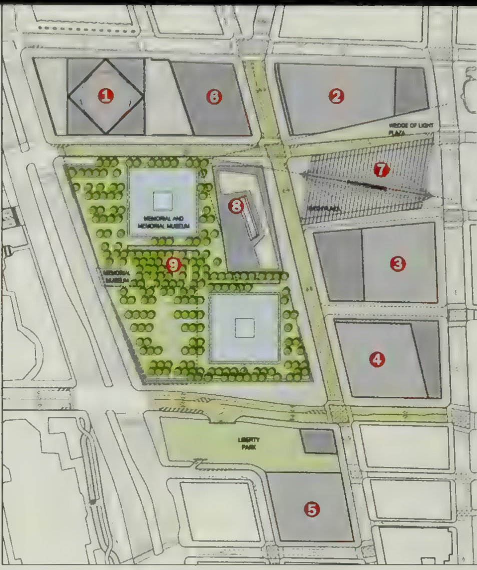
Rogers will design Tower 3 on the eastern side of the site, which will contain 2 million square feet of office space. In New York, Rogers is also designing an addition to the Javits Center, an East River waterfront park in Manhattan, and new towers for Silvercup Studios in Queens. Next door, 1993 Pritzker Prize winner Maki will design Tower 4 for the site's southeast corner. It will contain 1.8 million square feet of office space. Maki is also working on a new space for the United Nations in Manhattan.

French architect Jean Nouvel was originally tagged by Silverstein to design one of the towers, but he was not available soon enough, says Silverstein spokesman Dara McQuillan. The Port Authority of New York and New Jersey will decide who designs Tower 5.

The astonishing amount of star power at Ground Zero has prompted many to call for the release of Libeskind's design guidelines for the site, which they say could help the architects' disparate styles fit together. The guidelines, which have been distributed in draft form, have yet to be officially released, and the delay has angered many local designers, planners, and activists.

"To have come up with a master plan selection and not go through with it seems like a real undermining of public trust," says Frank Sanchis, senior vice preside at the Municipal Art Society, a nonprofit group that advocates innovative urban design in New Yo "There needs to be a common thread there," says Sanchis.

Perrone says that Silverstei architects will follow the draft gui lines, and that Libeskind's origina concept, an ascending spiral of buildings, will remain intact. *S.L.*



1. *Freedom Tower SOM*
2. *Tower 2 Norman Foster*
3. *Tower 3 Richard Rogers*
4. *Tower 4 Fumihiko Maki*
5. *Tower 5 Undetermined*
6. *Performing arts Frank Gehry*
7. *Transit Hub Santiago Calatra*
8. *Cultural Center Snøhetta*
9. *Memorial Michael Arad*

Trade Center design guidelines could be released

Daniel Libeskind's commercial-design guidelines for the World Trade Center site, which were released in draft form more than two years ago, have yet to be formally approved by the Port Authority of New York and New Jersey (PA) or the Lower Manhattan Development Corporation (LMDC), which are overseeing construction on the site. The lack of approval has drawn the ire of many in New York's planning and design community. Yet now that the contentious negotiations between developer Larry Silverstein and the PA have been settled, the guidelines may finally get their due. According to PA spokesperson Steve Coleman, "The board could conceivably vote on them in May or June." LMDC communications director Kori-Ann Taylor commented, "We are in the final stages of formulating design guidelines consistent with recent developments at the WTC site, and we will adopt and enact them in the near future."

The guidelines "describe the form, character, and standards of development that will support the master plan." Some of the topics covered by the draft chapters include overall site development, open space guidelines, and building design. Without formal approval, though, the guidelines have carried no official weight, and there is no scheme to control how the many elements at Ground Zero would interact.

Coleman says the draft guidelines have been "refined" since they were originally released. They would be released to the public after approval, he adds.

While it is unclear whether the guidelines will be approved soon, their formal release could—depending on their content—be a relief to designers and activists in New York, who have long been concerned that little attention had been paid to establishing connections between the various elements on the site. Yet final public judgement on the plans will not be made until after they have been formally approved.

Margaret Helfand, FAIA, a New York architect and a member of New York New Visions, a group of design advocates in Lower Manhattan, says the PA has been acting "more like a private developer than in the private interest." She is worried about what the final guidelines will look like, saying they could go in any direction She also has concerns about the placement of a mall at the base one of the towers (across from t memorial) and the planned closu of several streets in the area fo security purposes. *S.L.*

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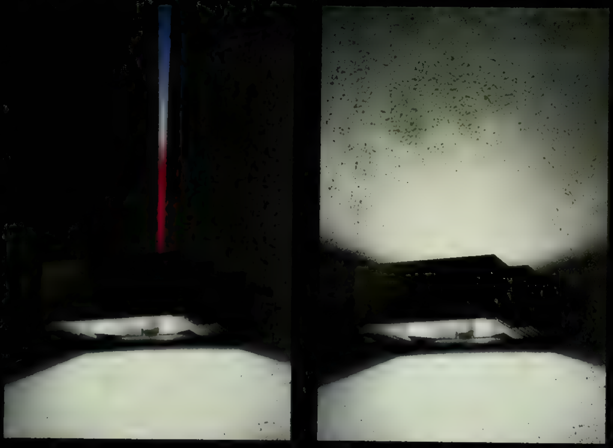

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SPECIAL HURRICANE REPORT

New Orleans planning team now uncertain

New Orleans Mayor C. Ray Nagin's Bring New Orleans Back Commission's proposed city master plan, which is being designed by Philadelphia-based architecture and planning firm Wallace Roberts & Todd (WRT), was supposed to be the definitive document for rebuilding. But now there is another major player vying to get involved. The Greater New Orleans Foundation (GNOF), a local public charity, was at press time soon to oversee a Request for Qualifications (RFQ) seeking planners for many of the city's neighborhoods. The Foundation's recently established Rebuild New Orleans Fund, along with a $3.5 million grant from the Rockefeller Foundation, will help pay for the effort.

Wallace released the initial draft of its plan in January. The report focused on a "neighborhood-center model," an integrated urban plan organizing neighborhoods around central focal points such as public squares, main streets, schools, and community centers. The draft also incorporated environmental and economic assessments, and pointed out prime rebuilding zones. The plan recommended a temporary moratorium on building in some of these areas, but after sharp public criticism those suggestions were scrapped. It appears the plans were troubled from then on.

After failing to receive FEMA funding earlier this year, Nagin's BNOB Commission was assured support from the state-run Louisiana Recovery Authority (LRA) for its planning process. But the LRA now appears to be teaming up with partner organization GNOF to start another planning process. LRA board member Donna Fraiche says her organization supports the GNOF's efforts, but the choice of the new planners is up to the GNOF board. LRA spokesperson Catherine Heitman says that the LRA will not be funding the Wallace plan, but that all planners would "be working together." A source close to the LRA did say that elements of the Wallace plan would likely be incorporated into any future planning proposals.

Like the Wallace plan, the GNOF's will focus on a neighborhood-center model, developed by New Orleans–based planners Concordia Architecture & Planning, who are helping develop the Foundation's RFQ. Concordia principal Steven Bingler says he informally advised WRT on the concept last year. Ben Johnson, C.E.O. of the GNOF, said that an RFQ would likely be released shortly after the New Orleans mayoral runoff on May 20.

Meanwhile, a lack of funding for the Wallace plan would put that proposal in dire straits. BNOB urban planning committee member Reed Kroloff, who is also the dean of the Tulane School of Architecture, says that "there's no answer" yet and th any major decisions about his team's plan will also be made after the mayoral runoff. "It's a mess," says Kroloff. "There are too many cooks in the kitchen."

Regardless of what scheme eventually moves forward, the city's leaders will have to coordinate with planning initiatives already underway in several New Orleans neighborhoods working independently with the advice of institutions like MIT and Harvard. What's more, the New Orleans Cit Council recently hired Miami-base consultants Paul Lambert and Sheila Danzey to help develop neighborhood plans for the 49 neighborhoods in New Orleans that took on 2 or more feet of water during the Katrina crisis. But Lambert told the New Orlean *Times-Picayune* that his efforts w not conflict with other schemes, saying "our goal is to respect the planning that has already gone o in the city." *S.L.*

Gulf residents rush to save valuable architectural materials

Still reeling from the effects of Hurricanes Katrina and Rita, historic preservationists and salvage workers are now fighting to keep thousands of tons of building materials from being heaped onto landfills, stolen, or otherwise lost. At stake are period doors and trim, floor-to-ceiling shutters, windows, wood trim, hardware, plumbing, light fixtures, lumber, and other materials.

Valuable materials can be found curbside.

Since it is unclear whether forthcoming legislation will address architectural salvage, it appears most residents are taking the issue into their own hands before their homes are gutted, demolished, or picked apart by thieves. To New Orleans locals like Nathan Favaroth, it seems like a race between the debris removal crews and the criminals to see who will get a bigger chunk of his home first. "The guy was picking up stuff with a bulldozer and tore that up," he says, pointing to the broken stoop of his 100-year old Lower Ninth Ward home. Angry that two decorative metal registers were stolen, Favaroth spray painted the side of his house with a message, daring the criminal to take the remaining one.

David Reynolds, who is the assistant director of The Green Project, a local, nonprofit that salvages recyclable materials, says he has heard of people removing truckloads of architectural elements from the area, even though the Louisiana Department of Agriculture and Forestry issued a quarantine on wood in the hurricane-affected areas of the state to prevent the spread of termites.

Sue Sperry, with the New Orleans Preservation Resource Center (PRC), says that many well-meaning volunteers have been instructed to gut houses down to the studs. During spring break, when student volunteers were present in highest numbers, tons of historic elements were placed curbside, she says.

The PRC has been working with neighborhood associations to educate homeowners about the value of historic materials, and its members have been sifting through curbside debris and storing treasures in the PRC warehouse for future renovations. The Green Project is working expand its role as salvager and reclaimer to include deconstructio in which unsalvageable homes are taken apart piece by piece. This alternative to demolition employs more people, slows the waste stream to landfills, and provides affordable materials for those in the community who are rebuildi

The Green Project has only deconstructed a handful of buildin Reynolds says. The agency has fiv new employees and the capacity to deconstruct one home a day, but most houses slated for demo tion are still headed for landfills. Meanwhile, Mercy Corps, an inter tional relief organization, is organiz a coalition of salvage companies and contractors for a deconstruct training session sometime in Ma *Angelle Bergeron*

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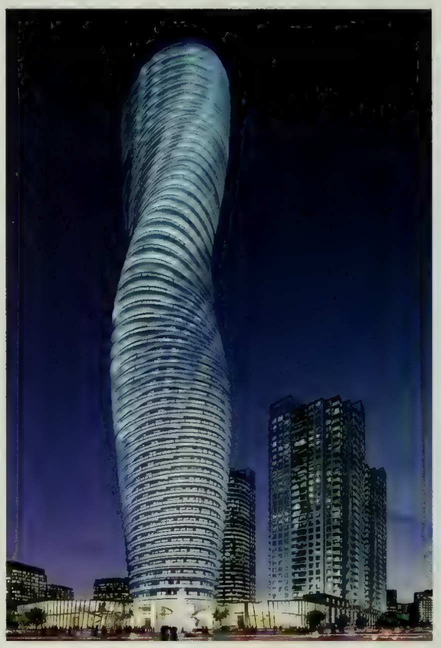
Twisting tower could put city near Toronto on the map

A twisting and undulating tower designed by Beijing-based MAD Architectural Design Studio has won a competition for a 50-story condominium in Mississauga, Ontario, a fairly nondescript city of 700,000 on Toronto's western flank. A nine-member panel of architects, urban planners, and urban design experts, as well as 6,000 ballot-casting residents, chose the winning design.

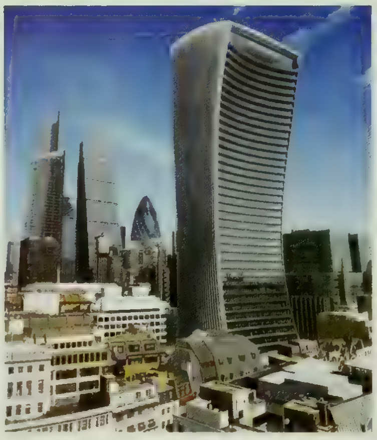
The $114 million concrete-and-glass condo promises to be one of Canada's most adventurous-looking buildings. This is ironic for Toronto, whose main architectural credits are its aging civic and performing arts centers, central library, and Pearson Airport. Mississauga had been a low-rise bedroom community for Toronto, but recently began sprouting office towers, businesses, industrial parks, and high-rise condos.

Toronto-based Fernbrook Homes and Cityzen Development Group say construction will begin in six months. Burka Varacalli Architects, a Toronto firm, will be MAD's local partner. The Canadian firm already has three condos under construction in Mississauga's city center.



The curvaceous tower planned for Toronto.

The developers sa that when the high-rise is completed in 2010 it will be the flagship for their five-tower "Absolu Community." It is the fir project in Canada for MAD, which has has an office in Ann Arbor, Michigan, and is also busy in China and Duba MAD principal Yansong Ma told the Toronto-based *Globe and Mail*: "My work has always tried to develop something more organic, more close to nature .. High-rises have close relations with technolo and culture. High-rises are landmarks of culture." *Albert Warso*



Viñoly proposes warped tower in London

Rafael Viñoly's proposed 45-story Fenchurch Street Tower in London could give the city's skyline a distinctive new look.

Viñoly says the building, which would be located near the Tower of London in the city's historic center, "appears to lean toward the river as if emerging from the outcrop of the site topography, focusing its views to the Thames." He adds that the facade's slight curves complement the curvature of the river and follow the geometry of the medieval streets around the site.

Viñoly's building would complement an emerging new skyline.

If construction of the 630-foot tower is approved, it would provide around 850,000 square feet of office space and 12,000 square feet of retail space. Viñoly's design proposal also includes a ground-level public park, a restaurant, and a bar.

The developer, Land Securities invited Viñoly to propose a design for the tower a year ago, and at the beginning of March the company submitted its application for planning permission.

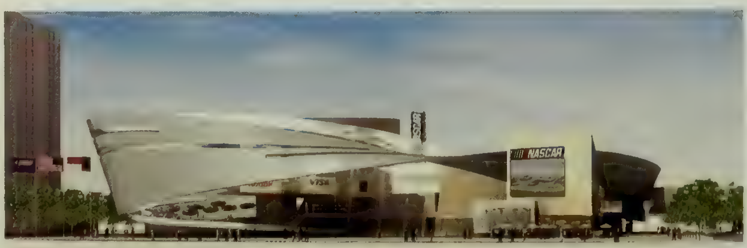
The plans will be reviewed by a city planning committee near the end of this year. Construction could start next year, with a provisional completion date of 2011. *Robert Such*

Pei Cob Freed designing Charlotte's NASCAR Hall of Fame

Charlotte, North Carolina, is hoping to capitalize on the popularity of NASCAR by attaching a new museum dedicated to stock car racing to its convention center. The city worked with Pei Cobb Freed & Partners (PCF) to prepare a preliminary design for their city's bid.

The $150.5 million, 200,000-square-foot project will include a hall of fame and a new ballroom. A parabolic form, which wraps the building, dominates the design.

According to Yvonne Szeto, a design partner with PCF, the curving form "expresses the speed and spectacle of the sport." Szeto and others attended several races and were impressed with the steeply angled tracks. "It was a fascinating topic for us to learn about," she says. "We were struck by the banking of the track. It is nearly 30 degrees in some places, which makes it hard to walk across. You really have to be moving fast."



The NASCAR Hall Fame's shape is inspired by stock car racing's steeply angled tracks.

Szeto says that PCF is looking at how the project can include both the entertainment aspects of the sport using virtual rides and simulators, as well as making tributes to racing figures. "Cooperstown is the cathedral for baseball," she says. "We are looking for an appropriate expression for NASCAR." *Alan G. Brake*

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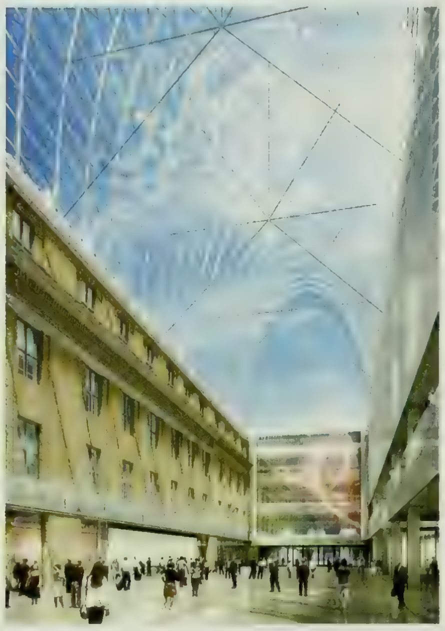


The intermodal space will include a sharply curving canopy.

SOM back in at New York's Moynihan Station

For now, it seems that Skidmore, Owings & Merrill (SOM) and David Childs have claimed the last chair in an ongoing game of musical architects at New York City's planned Moynihan Station. Yesterday, the architects revealed their third design for the $800 million-plus project, located inside the Farley Post Office on 8th Avenue, west of Penn Station in Midtown Manhattan.

Last summer, the project's developers, The Related Companies and Vornado Realty Trust, unveiled a design featuring a large, undulating glass canopy supported by thin steel columns by James Carpenter Design Associates and HOK's New York office. But the developers, and the Empire State Development Corporation (ESDC), which is coordinating public funding for the project, announced yesterday that they had switched to a plan by SOM. SOM had released plans for the station in 1999.

The developers could not be reached for comment on the scrapping of their most recent design, but Childs speculated that the plan might have been criticized because its steel columns would limit space on train platforms and be complicated to construct at that level. He also suspects that it may have been cost-prohibitive.

SOM's earlier versions of the station employed a parabolic, projected glass-and-steel canopy nicknamed "The Potato Chip." The firm's latest version alters that form, which Childs says would have forced changes to the building's facade and hindered the ability of the developers to qualify for over $100 million in historic preservation tax credits. The newest scheme has a vaulted glass canopy resting over the station's massive train hall, supported by a very thin steel skeleton, held in place by steel cables. Over the project's intermodal space, between the Farley Building and its western annex, that canopy will have a much steeper curve. The facade where passengers will enter the intermodal space, which is likel to be used for passenger check-in, will be replaced with a modern, but contextual, surface, he adds.

The 1910, Beaux-Arts-style Farley Building was designed by McKim, Mead and White, the same architects who built the original Pennsylvania Station across the street. That much-loved building was torn down in 1963.

Moynihan Station, which will contain train platforms for Long Island Railroad and New Jersey Transit, is being named for the late New York Senator Daniel Patrick Moynihan, an enthusiastic proponent of the project. The ESDC plan to buy the Farley Building from the United States Postal Service for $230 million. The new building will be divided into a 300,000-square-foot station, with 100,000 square feet of transit-related retail space, 250,000-square-foot post office, and a 750,000-square-foot commercial complex. The commercial area is expected to include a 150-room hotel, a large retail zone, and restaurants. *S.L.*

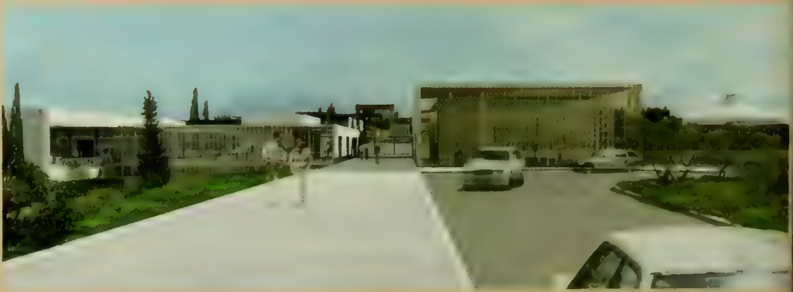
Carpenter chosen for Israel Museum expansion

Officials from the Israel Museum in Jerusalem, an icon of Israeli architecture and the country's premier showcase for art, archaeology, and Judaica, recently announced plans for a $50 million expansion (rendering, right). The project, which is being led by New York–based designer James Carpenter, will include four main elements: a covered entrance path, a new main entrance hall, reorganized and expanded galleries, and a new space for temporary exhibitions.

The 20-acre museum complex opened in 1965. Alfred Mansfeld and Dora Gad designed the Modernist, terrain-hugging museum, which is mostly clad in Jerusalem limestone. The campus includes a sculpture garden by Isamu Noguchi, as well as Frederick Kiesler and Armand Bartos's Shrine of the Book, which houses the Dead Sea Scrolls.

"One of the complexities of the existing campus is that it has grown significantly over the past 40 years," says Carpenter. "Our work is to ease people's sense of where they are going." The new elements, including the flat-roofed entrance path and rectilinear entrance hall, will be largely made of glass. Exterior shading, which is still being developed, will minimize glare and solar heat gain. Carpenter says the design, while "respecting the existing language" of the Modernist-style museum, will better integrate the buildings with Noguchi's sculpture garden.

Israeli architects Zvi Efrat and Meira Kowalsky were hired to develop the conceptual plan and to reorganize the museum's existing public and gallery spaces. Lerman Architects, based in Tel Aviv, are the project architects.



The program includes 80,000 square feet of new construction and 140,000 square feet of renewed gallery space. A previous expansion plan by James Freed that was seen as violating the museum's architectural language was canceled in 2002. The museum will remain open throughout the expansion, which is to begin in 2007 and be completed in 2010. ***Esther Hecht***

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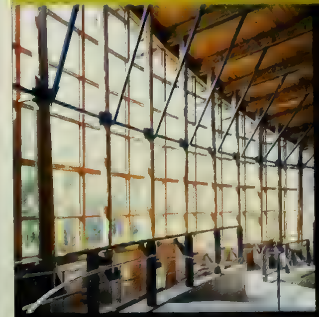

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ational Trust names 2006 Most Endangered

n May 11, the National Trust for Historic Preservation released its annual list of America's 11 Most ndangered Places. The list, first issued in 1988, is a public cry for help on behalf of sites considered ndangered due to "neglect, insufficient funds, inappropriate development, or insensitive public policy," ccording to the trust. On this year's list are the World Trade Center's Vesey Street Staircase, the only emaining above-ground remnant of the Twin Towers (above lower left); the historic neighborhoods f New Orleans (example, top right); and the historic communities of the Mississippi Gulf Coast example, above lower right), many of which were badly damaged or entirely destroyed by Hurricane atrina; and the Arts and Industries Building (top left), the first museum of the Smithsonian Institution Washington, D.C. The National Trust is a nonprofit group dedicated to saving historic places and evitalizing communities. The list's power to promote response is evidenced by two of last year's ntries: Frank Lloyd Wright's textile-block Ennis House, damaged by an earthquake in 1994, is now oing through its first phase of renovation; and Finca Vigía, Ernest Hemingway's home in Cuba, has enefited legislation that would make it part of a National Heritage Area. S.L.

mithsonian Arts and Industries Building, ashington, D.C.: The 1881 building was the st museum structure on the National Mall. huttered in 2004 after years of neglect.

lair Mountain Battlefield, Logan County, Va.: Site of an armed insurrection by unionized oal miners fighting for better working conditions. ow threatened by strip mining.

oo Wop Motels, Wildwood, N.J.: U.S.'s largest llection of mid-20th-century resort architecre. More than 100 of these funky, neon-covered otels have already met the wrecking ball.

rt Snelling Upper Post, Hennepin ounty, Minn.: Its Upper Post area, which conins 28 brick buildings constructed between the 70s and the early 1900s, has been long vacant.

storic Communities and Landmarks of e Mississippi Coast: When Hurricane Katrina last August, the historic communities and ndmarks here suffered incalculable damage.

Historic Neighborhoods of New Orleans, New Orleans, La.: Hundreds of these homes are tagged for demolition, and the future of America's most distinctive city is at stake.

Kenilworth, Ill.: Teardowns in this architecture-rich town have leveled many historic homes and replaced them with McMansions.

Kootenai Lodge, Bigfork, Mont.: The rustic wooden lodge and 20 other buildings are threatened by pending condominium development.

Mission San Miguel Arcangel, San Miguel, Calif.: A superb example of mission architecture, the 1821 complex was closed after a damaging December 2003 earthquake.

Over-the-Rhine Neighborhood, Cincinnati, Ohio: Famous immigrant neighborhood now plagued by crime and disinvestment.

World Trade Center Vesey Street Staircase, New York, N.Y.: It offered many a path to safety on September 11. Now threatened with demolition.

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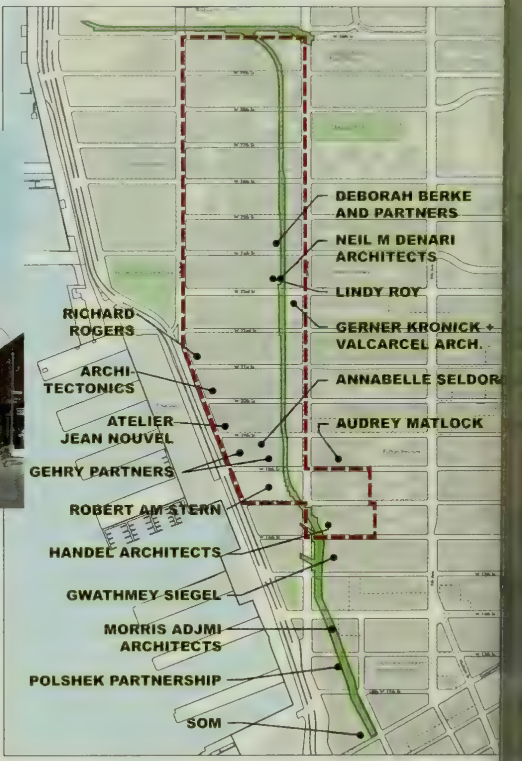
New York's High Line spurring innovative buildings and planning



Big-name architects (map, above) are dominating the area around the High Line (rendering, above left).

On April 10, workers began construction that will result in the conversion of Manhattan's High Line into a 6-acre public park. Trains once used the now-abandoned rail trestle, which snakes 1.5 miles across city streets, to deliver freight to buildings on the city's far West Side. The park will occupy the trestle's elevated rail deck, which rises between 18 and 30 feet above street level. The first section of the park, by the team of Field Operations and Diller Scofidio + Renfro, runs from Gansevoort Street to West 20th Street, and is scheduled for completion in spring 2008.

The High Line's redevelopment—spurred by a June 2005 rezoning for residential development—is triggering a construction boom in its surrounding neighborhoods. Prominent architects working here include Jean Nouvel, Frank Gehry, Richard Rogers, Annabelle Seldorf, Robert A.M. Stern, Audrey Matlock, Polshek Partnership, and Gwathmey Siegel.

Matlock's planned condominium on 447 West 18th Street, with its unevenly stacked envelope and irregularly angled bands of facade glass, is typical of many of these designers' edgy approach in this now-ultra-chic neighborhood.

Not just the architecture here is progressive. Urban design controls for the area ensure that adequate light and air reach the new elevated park. And in contrast to other parts of Manhattan, where current zoning generally mandates a continuous street wall, in the rezoned area along the High Line new buildings will be arranged in a staggered fashion. On certain large lots, up to 40 percent of a building's surface area can rise up ne to the High Line.

Matlock's proposed condo.

"Building around the High Line requires arch tects to be more innovative than in other parts o Manhattan," says Amanda Burden, chair of the New York City Planning Commission. To preserve open space here, the new zoning rules permit property owners to sell their development rights to building sites anywhere within the rezoned dis trict. In most areas of Manhattan, development rights can be sold only to adja cent property owners.

"We want to make sure that it doesn't turn into an elevated street," says James Corner, director of field opera tions. "Part of the magic of the thing is its complete separation from the city. It is completely severed from everything around it, and tha is what makes it an interestin place to walk." *Alex Ulam*

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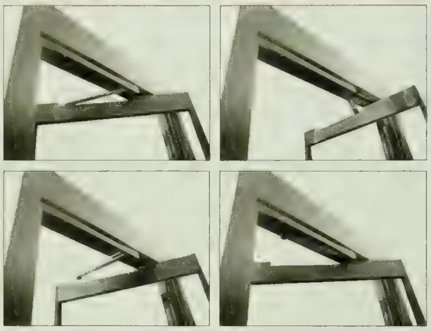

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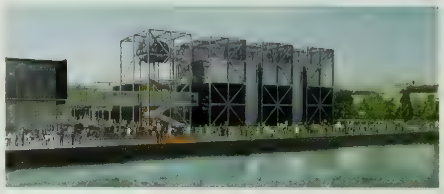
Harley-Davidson Museum being designed in Milwaukee

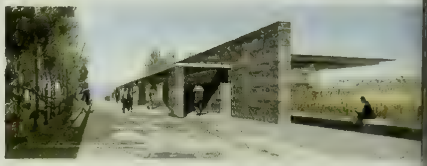


The Harley-Davidson Motor Company has unveiled its design for a new Harley-Davidson Museum, to be built in the industrial heart of Milwaukee, Wisconsin. The company was founded here more than a century ago.

Pentagram's New York office is designing the project's structure, exhibitions, and graphics. The museum will be spread over three buildings, which will contain shows, company archives, a retail shop, and restaurants. The project will evoke the gritty heritage of the company's motorcycles, and the industrial past of Milwaukee's Menomonee Valley. will be located on the Menomonee River just south of downtown, and be largely composed of black brick, glass, and exposed structural steel. Glass-and-steel skywalks will connect the three building and three steel towers will hide mechanical equipment while supporting Harley-Davidson signage.

Hammel, Green and Abrahamson is the architect of record. Oslund and Associates developed the landscape plan, which includes a riverwalk, greens, and terraces. The $75 million, 130,000-square-foot museum is scheduled to open in 2008 in time for the company's 105th anniversary. *John E. Czarnecki, Assoc. AIA*

Normandy center will tell story of D-Day heroes

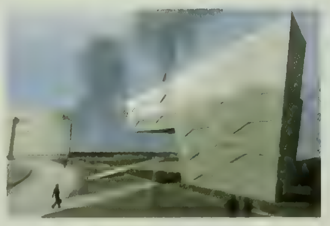


The American Battle Monuments Commission (ABMC) is developing the Normandy Interpretive Center (NIC), near the site of the Normandy American Cemetery. Designed by SmithGroup, it will tell the story of the American soldiers who died during the World War II coastal invasion.

Noting that the French and Germans already have centers documenting the battle, David Greenbaum, FAIA, a SmithGroup principal, says it was time for an American interpretation. To determine the program and style of the project, the ABMC convened historians, museum directors, and the architects for a charrette at Omaha Beach, France. One of the objectives was not to "steal th thunder" of the cemetery, but to "create somethi interesting in its own right," Greenbaum says.

Another goal was to stress U.S. troops' varie approaches in invading the coast, so the building will hug the landscape and offer views of a field, the sea, and the sky. The NIC's design draws on 1950s Neomodernism, with simple materials an colors. Due to the site's sensitivity, Greenbaum notes, "restraint was in order." *Diana Lind*

Hadid designing building at her Alma Mater



Zaha Hadid Architects has won an international competition for a building to house the Issam Fares Institute of Public Policy and International Affairs at the American University of Beirut. The school is Hadid's alma mater. The institute, founded in 2004, is an international think-tank for Middle Eastern affairs.

The competition called for a contemporary structure that would fit in with the landmarks of the century-old campus, located in the heart of the city on a site that slopes down to the Mediterranean.

The six-level project ha been conceived to reflect th undulating topography of th site, and the existing networ of pathways around it. Its upper levels, comprising researchers' offices, semina rooms, and the main readin space, extend over the site's boundaries. Bridg running through the building's atrium, connect the third and fourth stories. In order to keep th academic spaces quiet, the main auditorium a its amenities have been located underground.

The 21,500-square-foot building is expect to be complete by October 2008. *Seif El Rashi*

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News Briefs

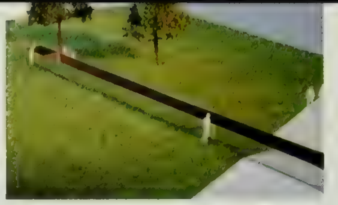
Green documentary on PBS What does Brad Pitt know about sustainable architecture? After narrating a six-part series entitled *e2, the Economics of Being Environmentally Conscious*, more than we may have thought. From the star's own mouth: "By employing the intelligence of natural systems we can create industry, buildings, even regional plans that see nature and commerce not as mutually exclusive but mutually coexisting."

The documentary will air in June.

The six-part series, scheduled to air on PBS in June, examines built and planned green buildings in New York, Chicago, China, and elsewhere, and explores the tenuous state of the environment. It addresses what architects have long known about the ecological importance and economic benefit of sustainable design. *Sarah Cox*

Holocaust Memorial in Vienna Stuttgart-based Fischer, Naumann (FN) and Partners and artist Kirstin Arndt have won an international competition to build Vienna's "Memorial for the Deported Neighbors," to commemorate the suffering of the Jewish community during the Second World War.

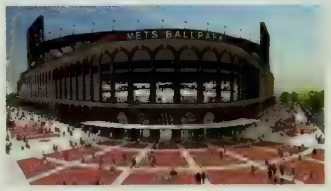
The memorial will be located in a park that is part of Norman Foster's redevelopment plan for the area around the demolished Aspang Railway Station. The design calls for a 98-foot-long by 7-foot-wide trench cutting through the park. Engraved in the sunken stainless-steel walls of the 16-foot-deep trench will be the names of thousands of deportees. Visitors will wear a path on the ground up to and around the memorial that FNP partner Martin Naumann says will have "poetic value." Completion of the approximately $490,000 memorial is set for 2008, although this could be delayed because Foster's master plan is currently on hold. *R.S.*



A model of the Vienna memorial.

New Mets stadium The New York Mets announced in April that Shea Stadium will be demolished and a new ballpark, designed by HOK Sport, will replace it. Following recent trends in ballpark design, the stadium will evoke early 20th-century ballparks and will be dedicated to baseball. The new ballpark will be smaller than Shea, reducing seating from about 57,000 to about 45,000. The stadium will also have 58 luxury suites; Shea currently has 45.

The new ballpark is meant to evoke memories of Ebbets Field, the former home of the Brooklyn Dodgers, particularly through an entry rotunda that will serve as the main entrance to the new park. Exposed steel girders will also remind Mets fans of the bridges tha bring them to Queens. Besides steel, the main building materials will be limestone, granite, brick, and cast-stone. *Kevin Lerner*



Rendering of the new Mets stadium.

10th Anniversary for RECORD Ad Jury After the redesign of ARCHITECTURAL RECORD in 1997, it became clear that the advertisers needed to give their pages a facelift, too. To tackle this challenge, the publishers founded an annual ad jury, which marked its 10th anniversary on April 25th, with a panel in Los

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Angeles. Each jury, made up of accomplished architects, rates ads n terms of design and content.

"The idea," says RECORD associate publisher Laura Viscusi, "is to educate advertisers about what architects respond to positively, and o honor those who've done a good job." Viscusi adds that ads have evolved aesthetically, vith less text and better hotos," and more often upport causes like ustainability.

This year's jury ncluded Stephen hrlich, AIA, Lorcan 'Herlihy, AIA, Michele aee, AIA, and Frederic chwartz, FAIA. Winners ncluded ads by Adobe, Hunter ouglas, Alcoa, and Dupont Tyvek. *arah Amelar*

ehry adjusting plans in rooklyn On May 11, Frank Gehry, IA, unveiled new models for his 22-acre Atlantic Yards development in downtown Brooklyn. He says the latest work is more sympathetic to the scale and character of the residential area that the project borders. Some of the buildings are shorter and less bulky than those that were previously presented. Many of them will have glass walls at street level, and others will not be built so closely together. Most of the buildings will be clad either in metal, glass, or brick, and their designs are generally more orthodox than the models presented last July. For instance, many buildings that had been tilting in various directions in the prior models are now standing straight up. *S.L.*

Gehry's project is less bulky, but still huge.

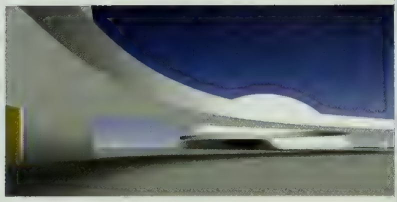
Fabric design pioneer dies

Walter Bird, a pioneer in the design of air-supported structures and tensioned membranes, died on April 6. He was 94. Bird, an aeronautical engineer who studied at MIT, founded Birdair, which manufactures lightweight fabric structures, in 1956.

Birdair has developed fabric roofs for the Metrodome in Minneapolis, Reliant Stadium in Houston, Atlanta's Georgia Dome, Olympic Stadium in Rome, the Denver Airport, London's Millennium Dome, and the Haj Terminal in Saudi Arabia. *Brian Carter*

Niemeyer designing in Spain

Brazilian architect Oscar Niemeyer, 1989 recipient of Spain's Prince of Asturias Prize, is designing a cultural complex dedicated to the prizes. The $30 million, 100,000-square-foot center will be a key element in the revitalization of Avilés, located on Spain's northern coast. Prince of Asturias Prizes comprise several fields, and are handed out in an annual ceremony in nearby Oveido. The complex, financed by the Principality of Asturias, will occupy a 150,000-square-foot plaza at the head of Avilés's narrow bay. A concrete hemisphere containing an auditorium will be connected via a serpentine canopy to a concrete arch housing a museum. *David Cohn*


Rendering of Niemeyer's museum.

ENDNOTES

- Nonresidential architecture billings in the U.S. have been positive for 18 straight months, says the AIA.
- The Municipal Art Society, a nonprofit urban planning group, and the Hells Kitchen Neighborhood Association, are suing to stop the expansion of the Jacob Javits Convention Center in New York.
- For the third time, ARCHITECTURAL RECORD will curate the U.S. Pavilion at the Venice Architecture Biennale. The pavilion will focus on RECORD's housing design competition, "Designing the Future of New Orleans."

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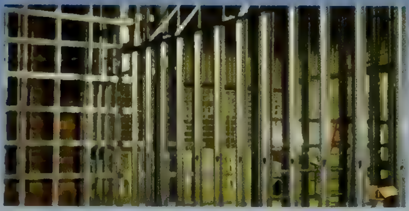

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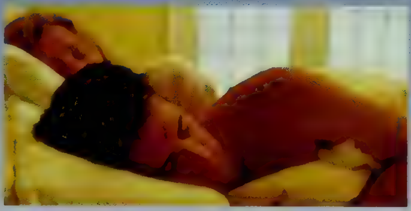

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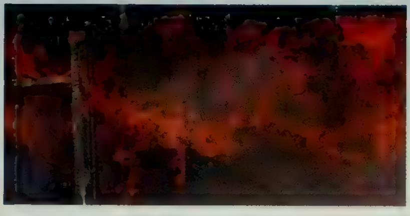

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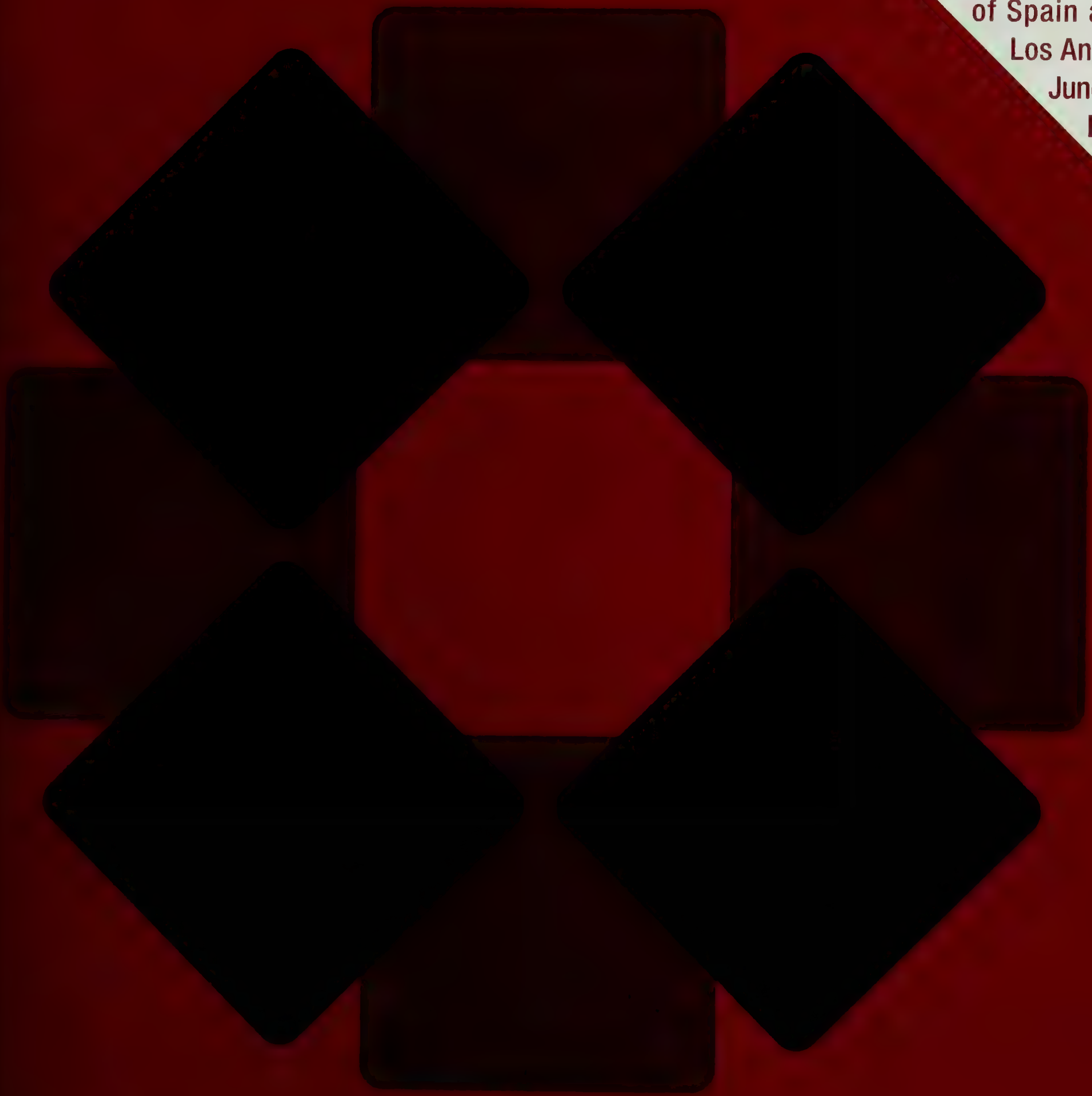

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For and about the emerging architect

archrecord2

esigning palaces for wealthy clients is fine, but the three architects in this month's archrecord2 ren't especially interested in that kind of work. For the principals of ESKYIU, design and technology re tools to engage the public in shaping the environment. For Josh Galloway, staff architect for ichmond, Virginia's Better Housing Coalition, creating better neighborhoods has built him a reward- ng career. There's more about these talented architects at www.archrecord.com/archrecord2/.

esign

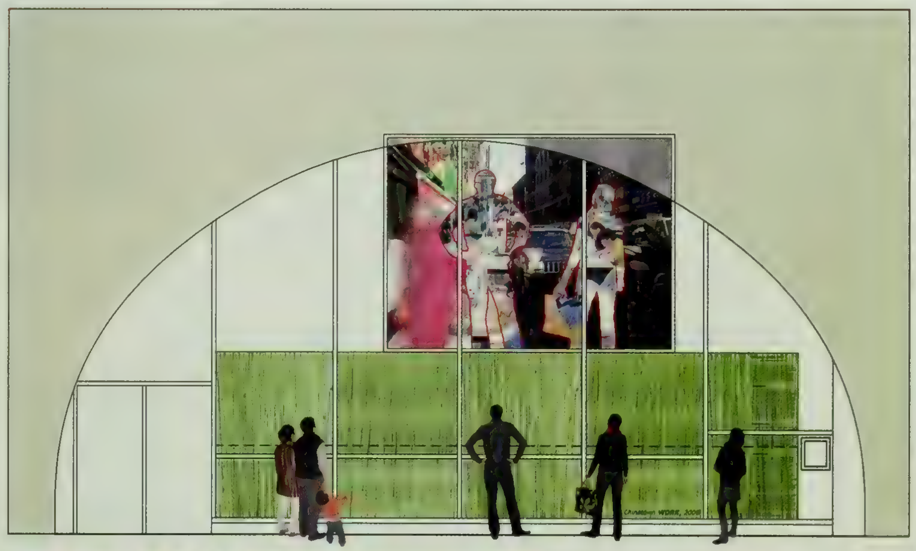
SKYIU: Taking it to the street

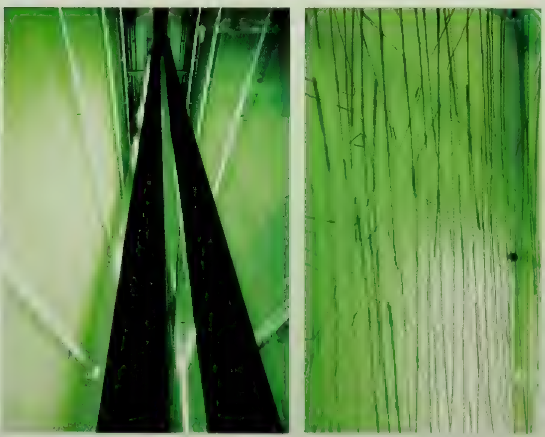
There are some people who just can't stop asking questions. Eric Schuldenfrei and Marisa Yiu are two of those people. Recognizing their inquisitive natures led iem to create a design collaborative, called ESKYIU, to icus on finding an intersection between art, architecture, nd global politics, and expressing it through design—in ther words, while on the one hand seeking answers to lve problems, the two are also using design to entice the mmunity to ask the questions as well.

"We're intrigued by and curious about how things ork, where things are made, and the dynamics of our ay-to-day," says Yiu. "We want to use architecture as a hicle to explore these issues."

ESKYIU's current project, called *Chinatown WORK*, a traveling interactive public art installation that incorpo- tes passersby by mixing their silhouettes with footage of ctory workspaces and time-lapse street images of New rk City's Chinatown. As pedestrians' silhouettes are pro- cted on an ecofriendly fabric-and-resin screen depicting sewn map of Lower Manhattan, they become part of the stallation, reflecting the even deeper part they play as embers of the community and consumers of the goods oduced within buildings they walk by every day without a ought to what goes on within.

For Schuldenfrei and Yiu, this engagement of technology, sign, and public participation makes them tick. "It's thinking out the way the world is linked," says Schuldenfrei, who says 's always been interested in site-specific work that brings se global links to the fore. One of Schuldenfrei's recent proj- ts, *Alladeen*, examined the contemporary phenomenon of international call cen- 's where Indian operators in Bangalore, India's fifth-largest city, often pass as





Chinatown WORK, New York City, 2006

Incorporating time-lapse images, real-time video processing software, unique sewn material, light, and public participation, ESKYIU collaborated with 3-form Material Solutions and October AI to create this participatory street installation that focuses on the contemporary work culture of New York City's Chinatown. The installation celebrates the people who made and still contribute to Chinatown.

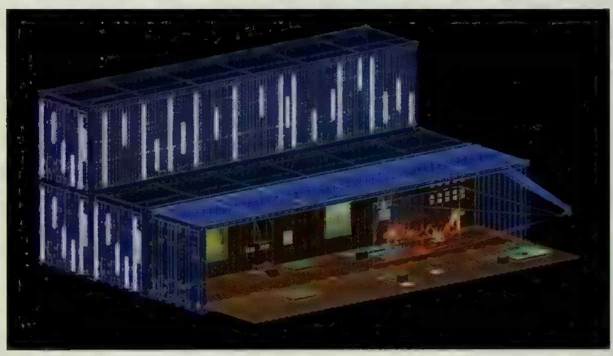
Chinatown Design Lab, Ne York City, 2006 (ongoing)
Marisa Yiu is one of five des panelists invited to particip the Rebuild Chinatown initi tive's Chinatown Design La project brings artists, archit community activists, and la scape architects together to c urban design initiatives to r the values and history of the

American. The project was a cross-media performance combining music, video, animation, an architectural set, and live performance. "The fact that a city is a back office to another country through simple phone lines is fascinating," he says. *Alladeen* has traveled across the world, including performances at the Walker Art Center in Minneapolis, the Singapore Arts Festival, and London's Barbican.

With grants (*Chinatown WORK* was sponsored by a grant from the Lower Manhattan Cultural Council), community support, and collaboration with product manufacturers and technology innovators, Yiu and Schuldenfrei have been able to keep ESKYIU creating these kinds of projects, while teaching gigs and their private design practices—Yiu's firm is called Mksyiu Studio and Schuldenfrei's is Eric Schuldenfrei Animation: Art + Architecture—enable them to pay the rent and keep their minds open to the next possibility. "There's no shortage of issues for us to explore," says Schuldenfrei. Yiu agrees: "We have the power and the technology to bring a whole other layer of access to people, and open up a forum of discussion." *Ingrid Spencer*

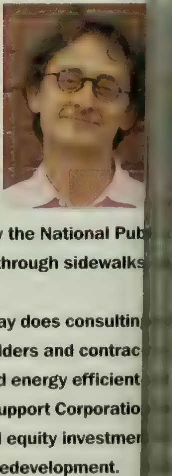
For more photos and projects by ESKYIU, Eric Schuldenfrei, and Marisa Yiu, go to archrecord.com/archrecord2/.

Byproduct (unbuilt)
Byproduct is an ongoing exploration of how to use discarded containers found in port terminals for housing or community centers by outfitting them with reclaimed wood, recycled glass, and salvaged technology products.



Work

After architecture school: Joshua Galloway



Joshua Galloway spent his initial post-graduation energy seeking a Frederick P. Rose Architectural Fellowship, designed to promote architecture and community design in low-income neighborhoods. But when that did not pan out, Galloway, who graduated from the University of Virginia's School of Architecture with a master's degree in 2004, was not deterred. In effect, he created his own fellowship by partnering with Richmond, Virginia's Better Housing Coalition (BHC) to build 80 affordable energy-efficient homes.

The BHC usually helps create affordable housing by buying properties, hiring architects, and then managing the final product. But with Galloway as their first staff architect, they are creating 10 to 15 prototype homes for the 80-home subdivision that will sit 8 miles south of downtown Richmond, Virginia.

Infill housing in Richmond's Church Hill neighborhood, by the BHC with Glavé & Holmes Associates.

With a bachelor's degree in landscape architecture from the Rhode Island School of Design, Galloway can't be kept designing inside all day. Recently, he and a team of volunteers held a community work day to clean up the park surrounding 15 homes that the BHC built in the Carver Neighborhood of Richmond. For the next landscape project, the coalition will install a garden in Winchester Greens, a neighborhood that was just selected as a Blue Ribbon Community by the National Pub Health Association because it promotes a healthy lifestyle through sidewalks parks, a community center, and street trees.

To create a wider impact on home construction, Galloway does consultin work on existing projects and holds training sessions for builders and contrac tors. These sessions teach techniques for more resource and energy efficient building and are co-hosted by the BHC and Local Initiative Support Corporatio (LISC), a national nonprofit which provides grants, loans, and equity investme to Community Development Corporations for neighborhood redevelopment.

Galloway may not have high-profile clients or his name on a shingle, bu knowing he's making an immediate impact on the living conditions in many p ple's lives is satisfying to him. "I figured I could go and work for a firm or I co go and work for the government, but if I go and work for affordable housing, be using my skills for a worthy cause." *Sarah Cox*

For more information on Joshua Galloway and Virginia's Better Housing Coalition, go to archrecord.com/archrecord2/.

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Two critics assess Jane Jacobs and her legacy

Critique

ane Jacobs: Fighting lack Until the Very End

y Michael Sorkin

ane Jacobs will forever be remem-
ered as the woman who stopped
obert Moses in his tracks. When
e city's planning czar set his sights
1 New York's Greenwich Village, with
esigns to bulldoze a boulevard
rough Washington Square and an
xpressway across Canal Street and
place blocks of vibrant life with his
eloved towers-in-a-park, Jacobs,
defatigable organizer of local fight-
ack, proved his deft antithesis. Her
ccess came from knowing what
e was attacking and, more cru-
ally, what she was defending. *The
eath and Life of Great American
ties*—her first masterpiece—is not
nply a screed against the ravaging
nplifications of urban renewal, but a
illiant account of the intricate ecol-
y of good neighborhoods. Like no
e else, Jacobs was able to under-
and and describe the interaction of
e social and physical components
rich community life, the dialectical
lwark of the good city.

Over the years, the idea of a
anichean struggle between
cobs and Moses has become a
rly sorry trope. As New York
sses through a long period of
sk prosperity—much of it focused
the same historic neighborhoods
ce considered so blighted—the
ationship between the city's social
d physical architectures has been
nsformed for both better and
rse. Although preservation has
erged as the planning equivalent
motherhood (tellingly, Moses had dissed Jacobs and her cohorts as "nothing more than a bunch of mothers"), its spawn—gentrification—has become the soft form of urban renewal, still removing the poor but lovingly restoring their former homes. And the hard version of the big plan is making a major comeback in a new wave of jumbo projects emerging on sites of more ostensible dereliction, or at least with smaller populations. These enormous initiatives include the reconstruction of Ground Zero, the redevelopment of the rail yards on the West Side of Manhattan and in downtown Brooklyn, and the transformation of the Brooklyn waterfront in Greenpoint-Williamsburg.

The presence of Jane Jacobs in all of this is palpable. Paradoxically, the design rhetoric of these mega-schemes ritualistically evokes principles Jacobs so strongly defended—the importance of the street and its life, the advantages of short blocks, and the need for a mix of uses, for density. Urban design, a discipline born in rebellion against the received wisdom of Modernist planning, derives many of its central formulations from their articulation by Jacobs, if too often dumbing them down to meet the bottom line or max out FAR. But Jacobs's influence is more genuinely present in the vociferous opposition to these projects; in the grassroots defense of threatened textures and prospects for local life; in suspicion of big, single-sourced plans; and in anger at the unyielding imperatives of profit in a city that seems bent on running its poor and middle class out of town.

In the past year or so, there has even been a marked rise in criticism of Jacobs herself, more and more widely denigrated as a relic of an outlook that's outlived its relevance. The terms vary slightly but almost invariably evoke the standard Jacobs/Moses duality. Vishaan Chakrabarti, former director of the Manhattan office of the Department of City Planning (now an operative for the developer The Related Companies) assails both Jacobs and Moses as evil twins, thwarting the enlightened operations of today's planning's post-planning "third way." Rem Koolhaas snidely dismisses Jacobs as an obstructive anachronism out of touch with the global urban inevitable. Even Nicolai Ouroussoff, *The New York Times* critic, in a commentary entitled "Outgrowing Jane Jacobs and Her New York" published following her death, suggested that Jacobs's influence had "distorted the public's understanding of urban planning" and offered that we might want to "mourn a bit for Mr. Moses as well."

This opposition is both dangerous and misleading, suggesting a false dichotomy between modernity and community and casting Jacobs's arguments as antithetical to vision. There's a confusion of categories here. Jacobs's beef wasn't with any particular style, and her formulations were not those of an architect; it was never her intention to fix the particulars for the design of new cities but to locate, in the fabric of the old, a more general set of values that were conducive to community and that might be extrapolated to many different urban situations. Jacobs was an advocate for choice, not someone to insist that everyone live in any one way—including hers—and she argued against the imposition of one-dimensional planning ideas on living urban tissue. The depth in her critique grew from the way her close and sympathetic reading of a beloved and familiar place excavated issues that extended far beyond it. It's simply wrong to convert this revelatory particularity into a deficit in her analysis. Hers was too fine a mind to think that the empty reproduction of forms, traditional or Modern, could be the vehicle for creating community life. She spent her life opposing the myopia of all such prescriptive singularities. Jacobs's famous comment that "a city cannot be a work of art," far from suggesting that cities not be beautiful, was her way of insisting that any uniform reading of the city imposed an order that obscured a view toward its true complexity.

Greenwich Village has retained its identity.

Jacobs spent more than half a

century making New York neighborhoods better places to live, not trying to preserve them in amber. Among her many achievements was the work she undertook on behalf of the construction of the West Village Houses, a series of small-scale (and Modernist!) apartment buildings with a total of 420 units, dotted through her old neighborhood. Although their architecture is perhaps modest to a fault, the apartments are spacious, and the project as a whole—quite large in aggregate—fits unobtrusively within the intimate weave of its surroundings. It's a model piece of urbanism because of this careful integration; because its architectural expression is not treated as a big, determining deal; and because it grew out of the self-organized impetus to provide new and better housing for people of modest means for whom the market had little empathy. The lesson for planning and design is about both basic physical harmonization and the clarity and value of the social interests embodied in these buildings. Every project, whether in the historic city or out on its fringes, embodies a compendium of such interests. Too often, architecture is complicit in obscuring the worst of these, through preservation that reveres old buildings extravagantly while driving out their inhabitants or by hyping the art-for-art's-sake pose of new developments that—however fab their stylings—press the same up-market homogeneities all around them.

Jacobs may not have been a conventional connoisseur of the fine points of architectural history and form, but nobody had a keener eye for architecture's effects. A little over a year ago, she wrote a letter to Mayor Michael Bloomberg to protest the city's plans for a massive makeover of a stretch of the Brooklyn waterfront with luxury high-rise apartment buildings. Her objection had nothing to do with tall buildings facing the water per se (the city is rich with brilliant examples of such projects, like Riverside Drive), but with their likely consequence for the ecology of the community behind them. She was worried about their effects. And she wrote as an advocate, as always, for the right of communities to steer their own destinies. The letter, an eloquent summary of Jane Jacobs's life and values, was published in *The Brooklyn Rail* and is worth quoting. Like everything she wrote, it is passionate, clear-eyed, and gets right to the point.

Dear Mayor Bloomberg,
My name is Jane Jacobs. I am a student of cities, interested in learning why some cities persist in prospering while others persistently decline; why some provide social environments that fulfill the dreams and hopes of ambitious and hardworking immigrants, but others cruelly disappoint the hopes of immigrant parents that they have found an improved life for their children …

What the intelligently worked-out plan devised by the [Brooklyn] community itself does not do is worth noticing. It does not destroy hundreds of manufacturing jobs, desperately needed by New York citizens and by the city's stagnating and stunted manufacturing economy. The community's plan does not cheat the future by neglecting to provide provisions for schools, daycare, recreational outdoor sports, and pleasant facilities for those things. The community's plan does not promote new housing at the expense of both existing housing and imaginative and economical new shelter that residents can afford. The community's plan does not violate the existing scale of the community, nor does it insult the visual and economic advantages of neighborhoods that are precisely of the kind that demonstrably attract artists and other live-work craftsmen, initiating spontaneous and self-organizing renewal. Indeed, so much renewal [is happening] so rapidly that the problem converts to how to make an undesirable neighborhood into an attractive one less rapidly.

Of course the community's plan does not promote any of the vicious and destructive results mentioned. Why would it? …

But the proposal put before you by city staff is an ambush containing all those destructive consequences, packaged very sneakily with visually tiresome, unimaginative, and imitative luxury project towers. How weird, and how sad, that New York, which has demonstrated successes enlightening to so much of the world, seems unable to learn lessons it needs for itself. I will make two predictions with utter confidence: 1. If you follow the community's plan, you will harvest a success; 2. If you follow the proposal before you today, you will maybe enrich a few heedless and ignorant developers, but at the cost of an ugly and intractable mistake. Even the presumed beneficiaries of this misuse of governmental powers, the developers and financiers of luxury towers, may not benefit; misused environments are not good long-term economic bets.

The West Village Houses in New York.

Come on, do the right thing. The community really does know best. Sincerely, Jane Jacobs

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Placing Jane Jacobs in a Larger Cultural Context

By Robert Campbell, FAIA

"When principle is invoked, common sense flies out the window." That's a quote from the autobiography of the great British novelist Doris Lessing.

The 20th century was notable, in architecture and planning, for people who invoked principle all over the place. The era was a snowstorm of gassy manifestoes and pompous all-governing principles.

Jane Jacobs stuck with common sense. She was, in the best sense, an unprincipled person. Jacobs was a pragmatist as William James defined pragmatism: The attitude of looking away from first things, principles, "categories," supposed necessities; and of looking toward last things, fruits, consequences, facts.

In other words, as she liked to say, "I always ask, What works?"

James liked to refer to pragmatism as "she," and sometimes he sounds exactly as if he's writing about Jacobs:

"She unstiffens our theories … She has in fact no prejudices whatever, no obstructive dogmas, no rigid canons of what shall count as proof. She is completely genial. She will entertain any hypothesis, she will consider any evidence."

Jane once wrote that if we don't keep our eyes on reality, "We will be lost in fogs of our own making." She belongs in a small class of people who look at reality directly, rather than through the lens of concepts, values, and ideas. She reminds me, in that regard, of the Yale historian Vincent Scully and the Berkeley, California, theorist Christopher Alexander. All three spend zero time worrying about the place in the history of ideas. They simply go out into the world, see what they see, draw their conclusions, and publish them. Such peop write as if they'd never read a book. Agree with them or not, they are th originals; they are invaluable.

There's another trio Jane belongs in. Her book of 1961, *The Death and Life of Great American Cities*, was one of three that appeared within a few months of each other. *Silent Spring*, by Rache Carson, arrived in 1962, and *The Feminine Mystique*, by Betty Friedan, in 1963. Each book chang the world. Each energized a revolution that continues to this day.

Friedan's revolution was feminism, sometimes called in the 1960s "women's liberation."

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Carson's was environmentalism, the realization that human beings are brainlessly destroying the planet that supports our life. (Global warming is only the latest stage in a crisis Carson identified almost half a century ago.)

Jacobs, of course, created a revolution in architecture and city planning. I was living in New York when I first read *Death and Life*. New York was my first experience of a real city. Reading, I felt as if Jacobs were translating from a foreign language. She made legible the hidden social and economic mechanics of the mysterious city I was daily experiencing.

Years later, when we'd become friends, I asked her if she thought the burst of three great books by American women had anything to do with the repression of women in the period after World War II. Those were the years when Rosie the Riveter and other career types were sent back to the suburban kitchen. Were these women authors energized by the need to push open a prison door?

It wasn't the kind of question Jane cared for. She rarely thought about herself, and she ignored it. But I think the answer is yes, and I think all three books should be seen as interlocked—as, in a sense, facets of the same impulse—a feminine, humanitarian impulse, one based on experiencing the world as it is, rather then trying to shape it by abstract theories like those of Le Corbusier and other principled moderns.

Not just an urbanist

Jane wouldn't have said so, but she was an environmentalist, too. The environment she cared about was the one we build for ourselves, not the one created by nature. She was a feminist as well, although she couldn't have cared less about feminist politics.

I was lucky enough to witness her classic confrontation, in Boston's Faneuil Hall, with James Rouse, the developer of Columbia, Maryland, and of the "festival marketplace" concept. Even in appearance, they were opposites: Rouse, a big man in golf-course lime-green slacks; Jacobs, exaggeratedly modest in what appeared to be a home-sewn granny dress. Rouse spoke first, quoting the famous words of Daniel Burnham: "Make no little plans; they have no magic to stir men's blood." Jane brought down the house when she quietly announced, "I'm not sure big plans ever did have the magic to stir women's blood." Did they jointly script the moment? I never asked.

Jane believed in a world not of grand plans, of interstate highways and urban renewal projects, but rather in a world created by many independent initiatives unfettered by government. Good cities were made by the neighbor, the entrepreneur, the corner grocer, multiplied by millions. Good planning should support the spontaneous, interactive life and growth of such initiatives. Master plans (note the masculine language), handed down from above, were usually stupid and brutal.

She was an activist as much as a writer. In Greenwich Village, she joined a protest that killed a plan to push Fifth Avenue through Washington Square, then helped stop the egregious Lower Manhattan Expressway. In some ways her New York career damaged her reputation. She was seen as a fetishist of the West Village way of life. I remember my old boss Jose Luis Sert, an AIA Gold Medalist and Corbu disciple, once dismissing her as a Romantic. I bite my tongue to avoid saying, "If Jane Jacobs is a Romantic, what does that make you?" Compared to her, Sert was a dreamer.

New York is a provincial town, and New Yorkers still see Jane as frozen in that West Village image of the 1960s. But when she left the Village and moved to Toronto so her sons could avoid the Vietnam draft, she became equally active there.

Jane was a national figure in Canada, consulted by everyone from prime ministers on down. Recently she helped persuade Toronto to create a new zoning district in which virtually all uses are permitted, almost none banned. The only restraints are on the size and shape of the building envelope. She believed such a district would nurture her kind of urbanism: the unplanned, entrepreneurial mix of all kinds of people and purposes.

Impact in Canada

For years, she worked with the so-called C-5 group—the mayors of Canada's five largest cities—in a "New Deal for Cities" campaign. The goal was to persuade Canada, where political power lies largely with the provinces, to recognize the economic value of cities and free them to chart their own destinies.

The enduring fame of *Death and Life* annoyed Jane in her later years. She thought she'd written more important books. She would name *The Economy of Cities* (1969) and *Cities and the Wealth of Nations* (1984). The latter eerily predicts many aspects of the global economy of today. Another must-read is *Systems of Survival* (1992), a brilliant discourse on the different kinds of ethics with which we organize society—although it's written in a fictional form for which Jane had little talent.

With characteristic modesty, she also took the time to produce a book hardly anyone read: *A Schoolteacher in Old Alaska*, which chronicles the life and adventures of a great-aunt of Jane's, who taught on the islands off the Alaskan coast.

Jane was modest in other ways. Once I was asked by a couple of AIA board members to sound her out about receiving the Gold Medal, which had never been given to a woman or a nonarchitect (and still hasn't). Jane, whose husband was an architect, knew perfectly well the prestige of the Gold Medal. But my phone call was a comic disaster. Why, she wanted to know, was I interrupting her morning's work with something so unimportant?

A year or so later I got a call from Bill McDonough, then dean of architecture at the University of Virginia. He wanted to give Jane the Thomas Jefferson Medal and he understood I had her phone number. Would I....?

Lots of luck, I thought, and made the call with trepidation. But this time Jane was delighted. "My father and both my brothers went t UVA," she said happily. "I'd love to d it, as long as I can spend my time there talking with students."

I remember best a visit to Jane at her Toronto house, when we spen a long Sunday afternoon on the fron porch eating pastries she'd bought at some ethnic grocer. She was ove weight by then, but she moved quickly, even friskily, as she climbed up and down staircases to show me the house. At every level, on a yard or deck or counter, there was some kind of modest garden. In her workplace stood the small portable manual typewriter on which she did her writing. A son, who lived near by dropped over to see how she was doing. Her quiet street was a short walk from a university and a downtown bus. It was the life of an urban villager at its best.

All revolutions breed excess, and Jane's is no exception. Citizen activism has its limits. It's not her fault, but we're now too often governed by the tiny minority of citizen who are willing to drink stale coffe out of Styrofoam cups at 11 P.M. a a planning meeting. Often they do better job than the master planne of old. Often they don't.

We still need big plans. We ne experts and professionals. How about a national high-speed railroa system? How about a vigorous exp-ration of urban growth boundaries? How about a TVA-type planning agency to deal with the hurricane coasts, from Cape Cod to Texas? We've let the balance dip too far toward piecemeal amateur plannin

Last December, I got a holida card from Jane. You could tell, fron what she wrote, that she was failin a little. Together with a Toronto friend, I planned a dinner with her for this spring. We didn't make it soon enough. ■

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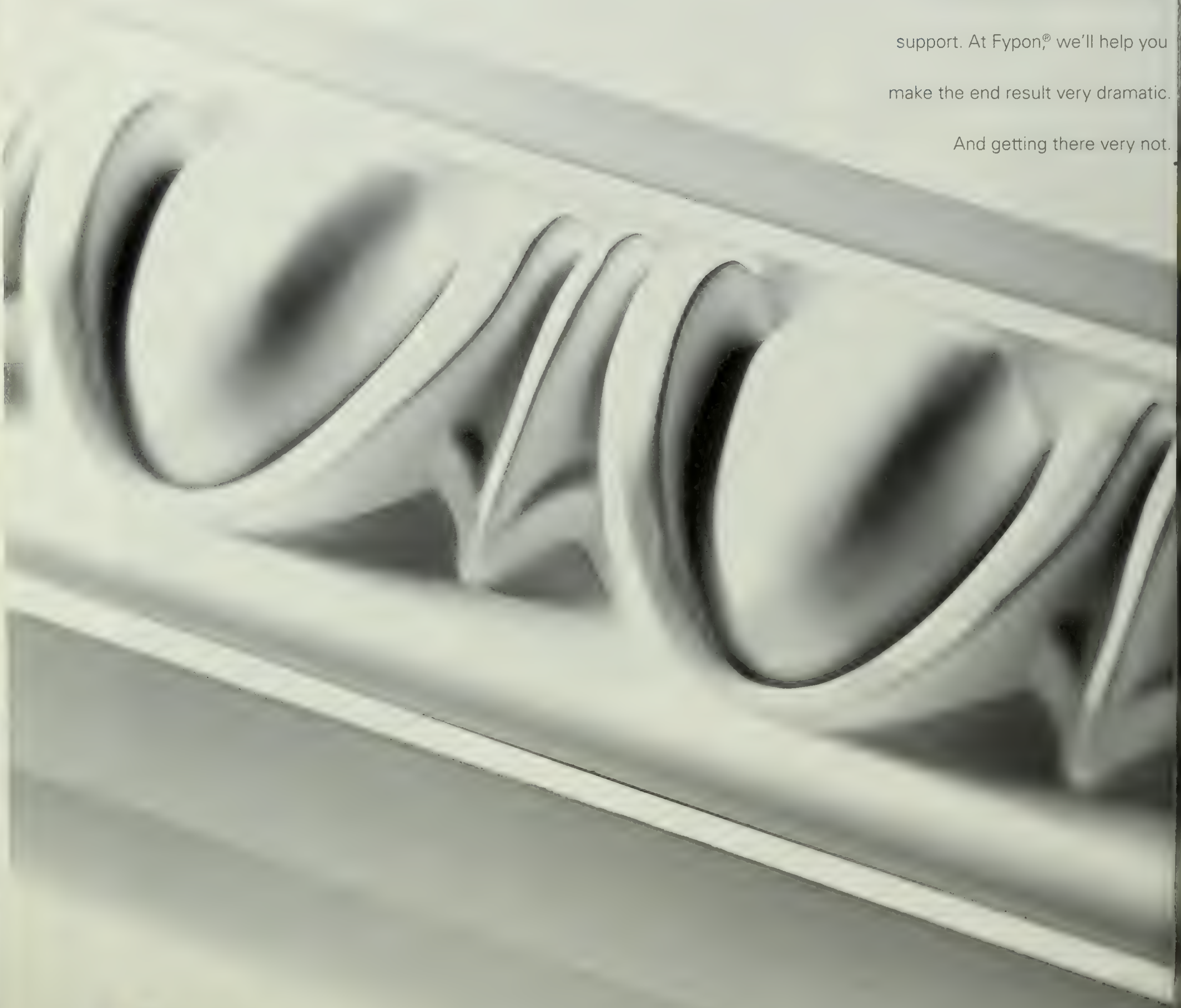

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Thinking big: buildings, reputations, and egos

Books

e Edifice Complex: How the ch and Powerful Shape the orld, *by Deyan Sudjic. New rk: Penguin, 2005, 416 pages, 28.*

n Rand meet Deyan Sudjic! Sudjic, chitecture critic for the *London server*, cheerfully shatters ideas out architects' individualism and egrity. In lively, literate language, he tails why famous clients commis- n major projects and why famous chitects accept such commissions. not a pretty picture.

Clients build, he says, "to duce, to impress, to intimidate," metimes to nation-build, and usu- to assure their legacy. All chitecture, he argues, is political d an expression of power. Among ny other examples, he cites poleon III's rebuilding of Paris, ler's overpowering government ldings, and Sadam's Mother-of- Battles Mosque. Totalitarians and monomaniacs, Sudjic writes, "offer architects more opportunities for 'important' work than the liberal democracies."

But, adds Sudjic, "to work at all in any culture, the architect has to establish a relationship with the rich and the powerful. There is nobody else with the resources to build." Power and riches spawned Mies's early Modern towers, Mitterrand's Grands Projets, and Gehry's swooping museums. Architects who claim their work is autonomous or neutral or that political design is confined to "an isolated ghetto" delude themselves, Sudjic believes.

As a result, he thinks architects are more lapdogs than great artists. Their work may give them an intimate relationship to power, but "they have remained powerless in the hands of those who wield it." Because architects want, above all, to build, they will do almost anything to be able to build. Had Hitler wanted Modernism instead of Classicism, Sudjic argues, Albert Speer would certainly have given it to him.

In a well-researched tour from Baghdad to prepartition Pakistan to 21st-century New York and back, Sudjic writes about what makes societies build as they do and what a society's buildings mean. A sort of Truman Capote of architectural authors, Sudjic loves the juicy, behind-the-scenes anecdote and tells it in sparkling prose. For most architects, Sudjic's book goes down like a perfectly turned-out soufflé, but you'll want to deflate it occasionally to safeguard your self-image from collapse. *Andrea Oppenheimer Dean*

The Iconic Building, *by Charles Jencks. New York: Rizzoli, 2005, 224 pages, $35.*

After decades of critiquing Postmodernism's rise and fall better than anyone else, Charles Jencks would seem the ideal observer to make sense of the riotous structures now transforming our urban landscapes—what he describes as "the emergent zoo of contemporary architecture, an extraordinary liberation of the imagination unprecedented in its scale and virtuosity (and lack of taste)." He's also a writer with the clarity to capture in a phrase the essence of work by Zaha Hadid ("her buildings seem to rush off the ground like rockets leaving at twenty degrees from a tilted launch pad") or Santiago Calatrava ("a media-driven engineering that appeals more to the public than to those interested in complex architecture").

Unfortunately, in *The Iconic Building*, Jencks seems to have his hands tied by the fact that for years he championed many architects, such as Frank Gehry and Daniel Libeskind, who are gathering acclaim and commissions, and whom he might otherwise now criticize. The result is an oddly naive book. There are artistic insights, such as Jencks's definition of a successful icon as something "both enigmatic and expressive, (and) it must suggest much more than it names ...."

But Jencks disregards a vital ingredient in today's architectural equation: publicity-hungry clients and status-seeking governments often use celebrity architects as marketing gimmicks. This doesn't necessarily make the buildings any better or worse, but they aren't isolated works of art. Commercial and political motives are at the core of why they exist—and that aspect of the "emergent zoo" is one that Jencks prefers to brush aside. *John King*

Louis I. Kahn, *by Robert McCarter. New York; Phaidon Press, 2005, 512 pages, $85.*

For most designers, image is everything. For Louis Kahn (1901–74), arguably the most influential architect of the second half of the 20th century, image—or beauty—was an unplanned outcome that evolved from the design process. Robert McCarter writes, "For Kahn, architecture was not to do with what a building looks like but to do with how its spaces are ordered, with how it is built, and how these affect what is experienced by those who inhabit it." McCarter uses Kahn's own criteria when examining the architect's major works, including the capital complex in Dhaka, Bangladesh; the Salk Institute in La Jolla; and the Kimbell Art Museum in Dallas.

For many years after his death, Kahn, who built big heavy buildings of bricks, stone, and mortar that evoked a sense of spirituality, was ignored. It's probably no coincidence that interest in him has revived at a time when building materials have become ever thinner and more disembodied.

Appropriately, McCarter's book is square and hefty. If Nathaniel Kahn, the architect's son, was in search of a father he did not know in his film *My Architect*, McCarter is in search of Kahn's approach as an architect whose influence we're again beginning to feel. Kahn, who spent his adult life in Philadelphia, indirectly inspired "both the (historicist) post-modernist and (urbanist) neo-rationalist critique of modernism," writes McCarter, "and demonstrated that a critically developed modern architecture is the only viable mode of construction for our time, directly inspiring the contemporary return to modern tectonic and material order in architecture."

McCarter thoughtfully teases out major themes of Kahn's work, analyses his major buildings, offers computer-generated likenesses of unbuilt projects, and presents a selection of the architect's writings and a year-by-year list of projects in appendices. Kahn would be pleased. *A.O.D.*

Eero Saarinen, *by Jayne Merkel. New York and London, Phaidon, 2005, 256 pages, $75.*

Some architects are wildly famous during their lifetime, fall out of favor, and are all but forgotten. Eero Saarinen has not been forgotten, but he did fall out of favor, and even today not many architects or students of architecture seem all that interested in him. (Actually, Rem Koolhaas is, I suspect Santiago Calatrava might be, and, plenty of other architects are influenced by Saarinen, albeit almost unknowing Saarinen's works remain among th icons of American Modernism and are wildly popular among the publi To wit: Dulles Airport, TWA at JFK, and the St. Louis Arch.

What made him so popular? Was it his unwavering need to

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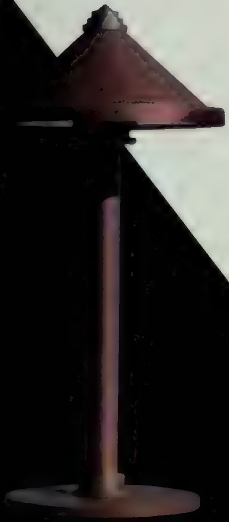

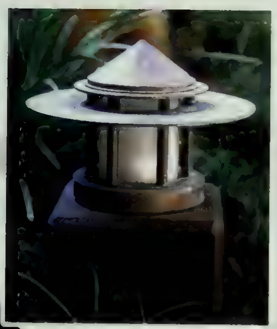

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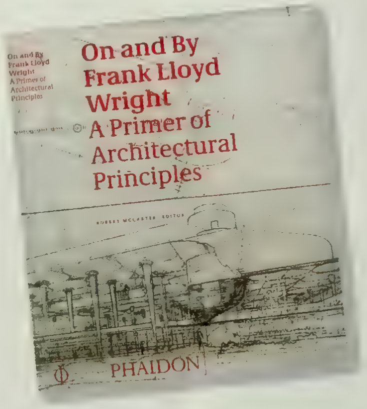
eschew stylistic consistency and search for the perfect and unique solution to each architectural problem? Was it his pushing of the technical envelope? Perhaps it was his unabashed interest in the associative symbolism of buildings at a time—the 1940s and '50s—when Modern architecture was supposed to disavow the rhetorical?

Saarinen's oeuvre typifies the aesthetic experimentation of the "second phase" of the Modern movement, during the immediate postwar era. Jayne Merkel's complete and clearly written tome provides excellent insights into Saarinen's method and intentions. Most important, however, are Merkel's biographical chapters concerning young Eero's education, his relationship with his father Eliel, and his collaboration with artists and designers such as Charles Eames. Merkel's strong suits are her limning of Saarinen's connections to his collaborators and patrons, and how she shows his independence from the crosscurrents of theory and practice during his all-too-short career (He died in 1961 at the age of 51). Other recent books on Saarinen are heavy on illustrations and light on substantive text, and are inadvertantly dismissive of him as an Expressionist. Merkel's text corrects that. Her book can't possibly be the last word on an architect of Saarinen's significance, but it is the best we have.
Thomas L. Schumacher

On and By Frank Lloyd Wright: A Primer of Architectural Principles, *edited by Robert McCarter. London: Phaidon Press, 2005, 372 pages, $60.*



The centerpiece essay of this fine collection is "Chicago Frame," from 1956, in which Colin Rowe (1920–1999) convincingly speculated why Wright shunned steel frame construction. "Unlike Sullivan, who had approached architecture primarily with the object of realizing an expressive structure," Rowe wrote, "Wright was, from the first, abnormally sensitive to the demands of an expressive space." And so, while the mentor refined the facades of Chicago's office buildings, the protégée pursued interlocking interiors in Oak Park houses.

It isn't surprising that the other essayists here—mostly academics—fail to match Rowe's intellectual precision and readability. The writers, including Kenneth Frampton and David Van Zanten, however, do well in bearing down on specific ideas found in Wright's work. On the other hand, the great architect himself, in three essays, one each from his early, middle, and late periods, is irritatingly self-serving and vague "What is needed most in architecture today is the very thing that is most needed in life—Integrity," he writes at the beginning of a 1954 tract, echoing a 1932 essay included here and adding little to flesh it out.

We learn best not from reading Wright but by looking at and analyzing his work, and allowing us to do so is the whole point of th collection. Although most of the essays have been published elsewhere, many employ drawings only recently made available from Wright's archives, and while small, the illustrations are readable and informatively integrated with the text. *Allen Freeman*

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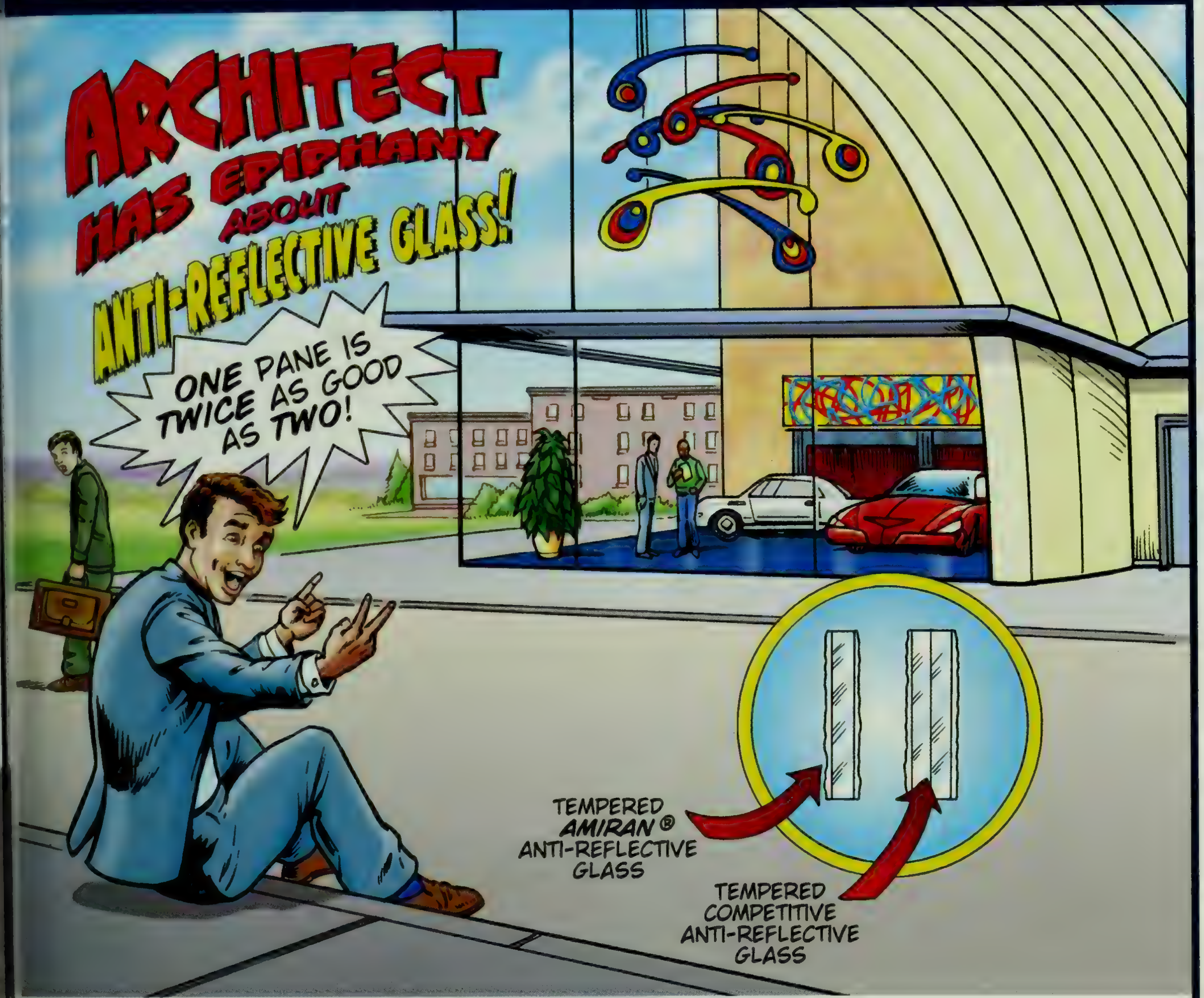
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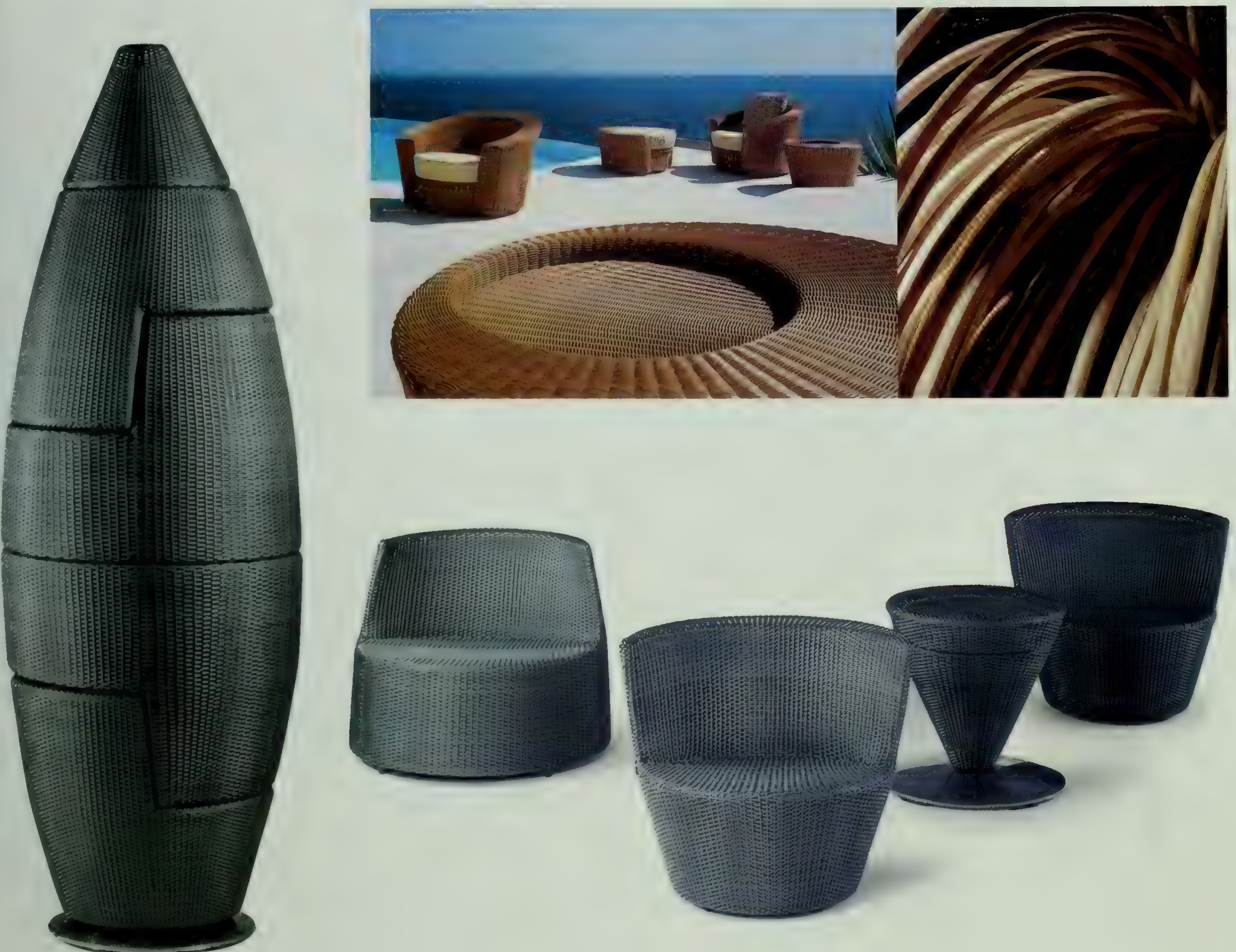

By Rita Catinella Orrell

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Counterclockwise from left: Obelisk stacked and unstacked (three of four chairs shown); Hularo fiber; Hemisphere.

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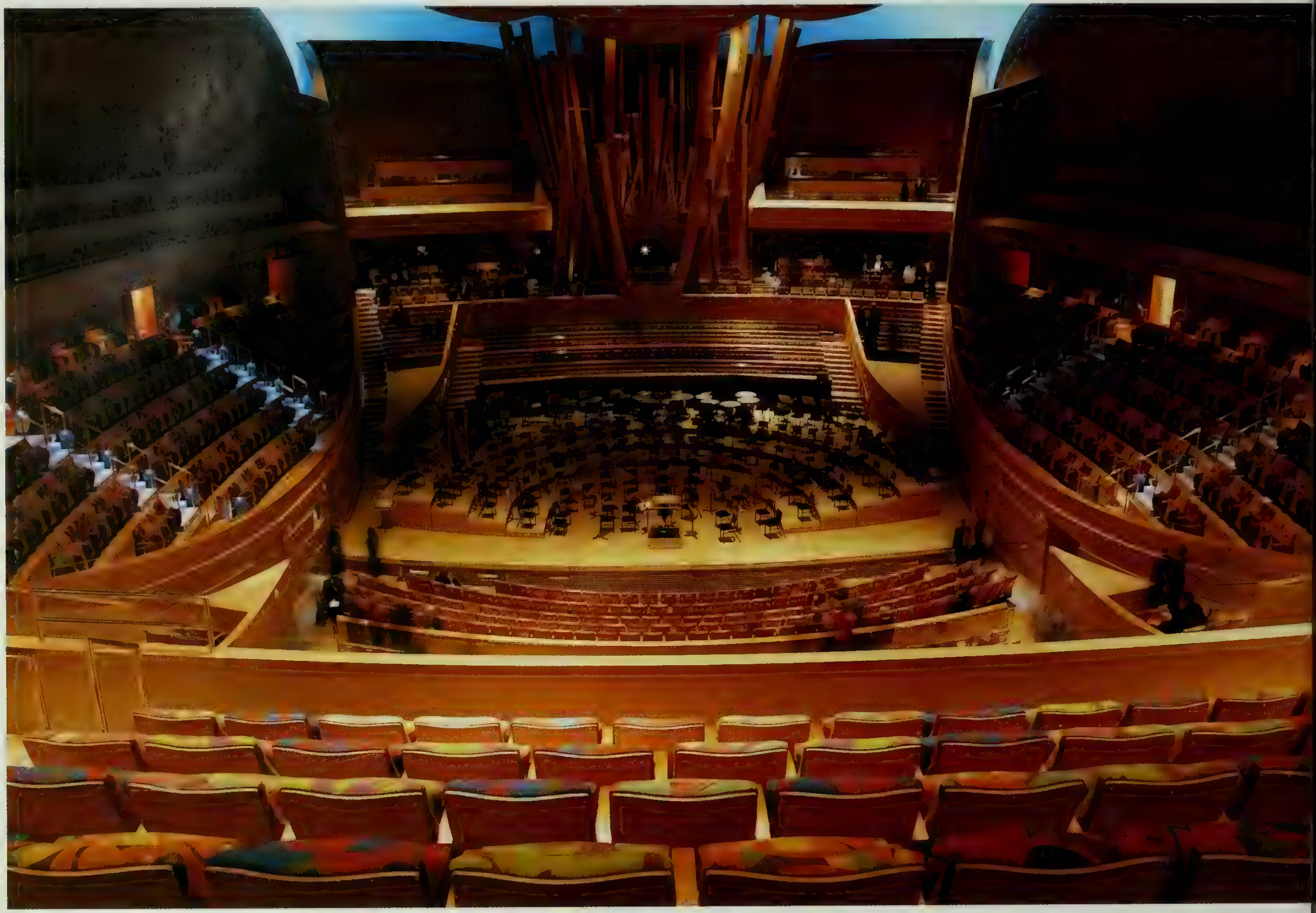

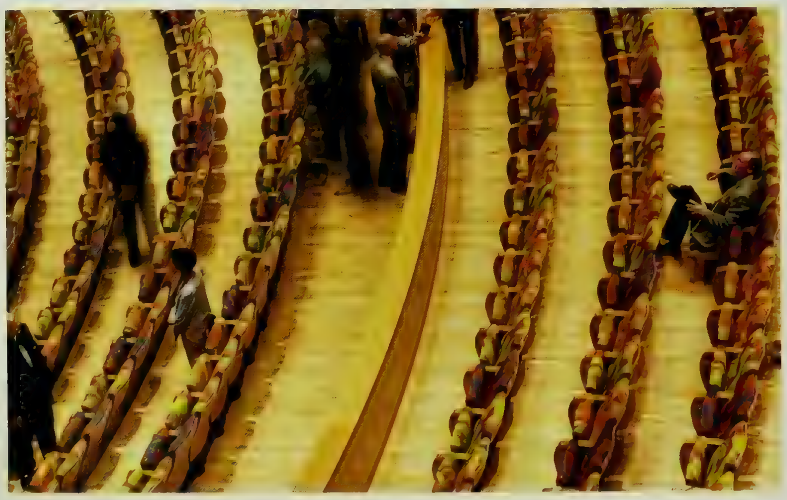

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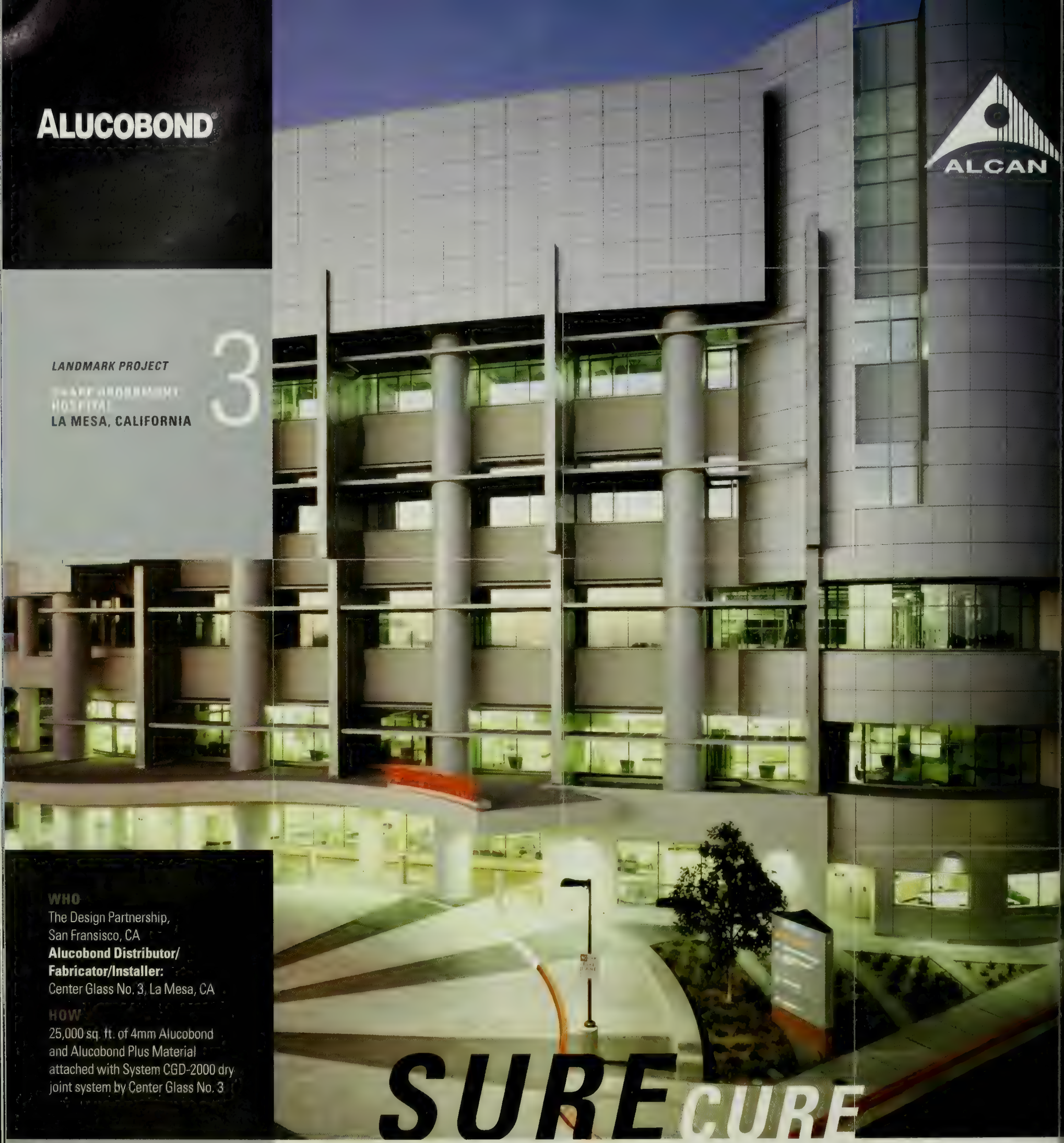

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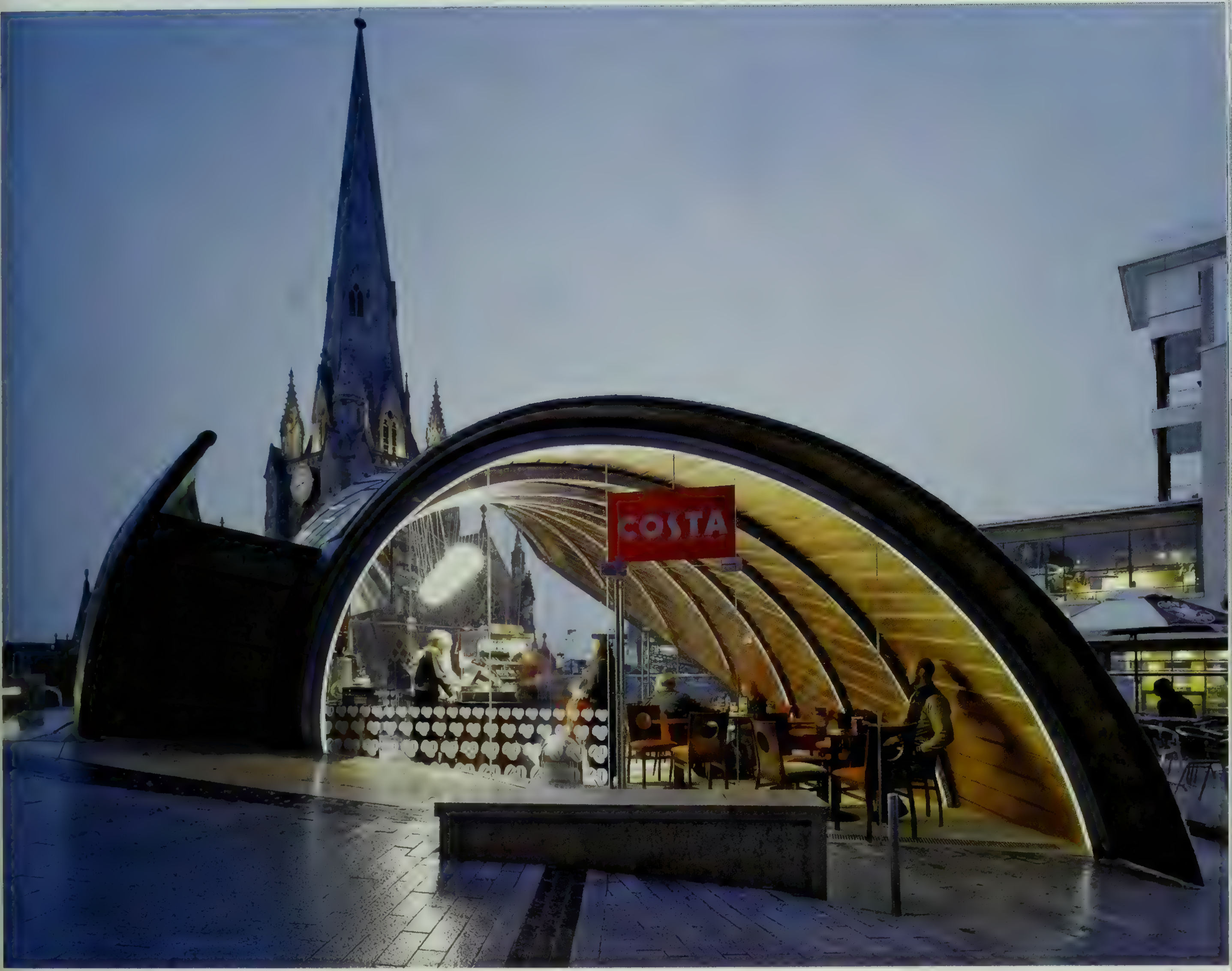
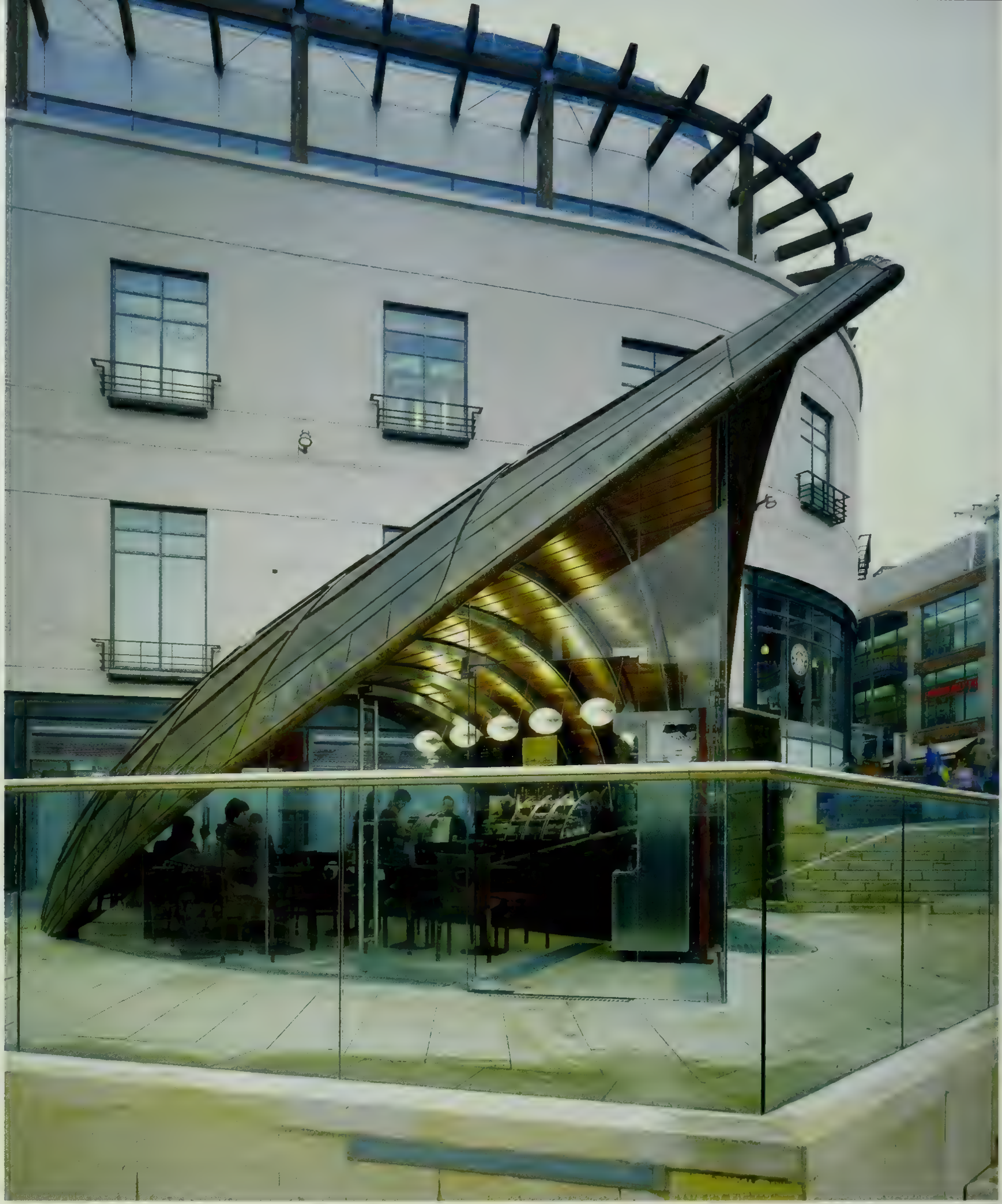


By Kelly Beamon

A little café washes in on a square's new tide

Brummies, as the locals in Birmingham, England, are called, have shopped at the city's 40-acre Bullring Shopping Center under the spire of St. Martin's Church since it actually hosted bull baiting contests in the 16th century. The baiting, of course, has abated, but shopping at the intersection of the city's four major roads has survived, to a greater or lesser extent. Crowded with market stalls in the 1800s and updated with a rotunda in the 1960s, the square faltered in the 1980s when the number of large outlets dwindled to a single department store.

Rather than erase the past, the latest revamp, which has once again revived the square as a commercial destination, aspires to a sublime vision of urban planning where the ancient and the boldly modern coexist. At its center, nestling comfortably between the old and the new, is a nautiluslike nugget called the Spiral Café. Designed by London-based Marks Barfield Architects, the café combines high-tech building methods with an organic aesthetic invoked by weathered copper and a mollusk's shape.

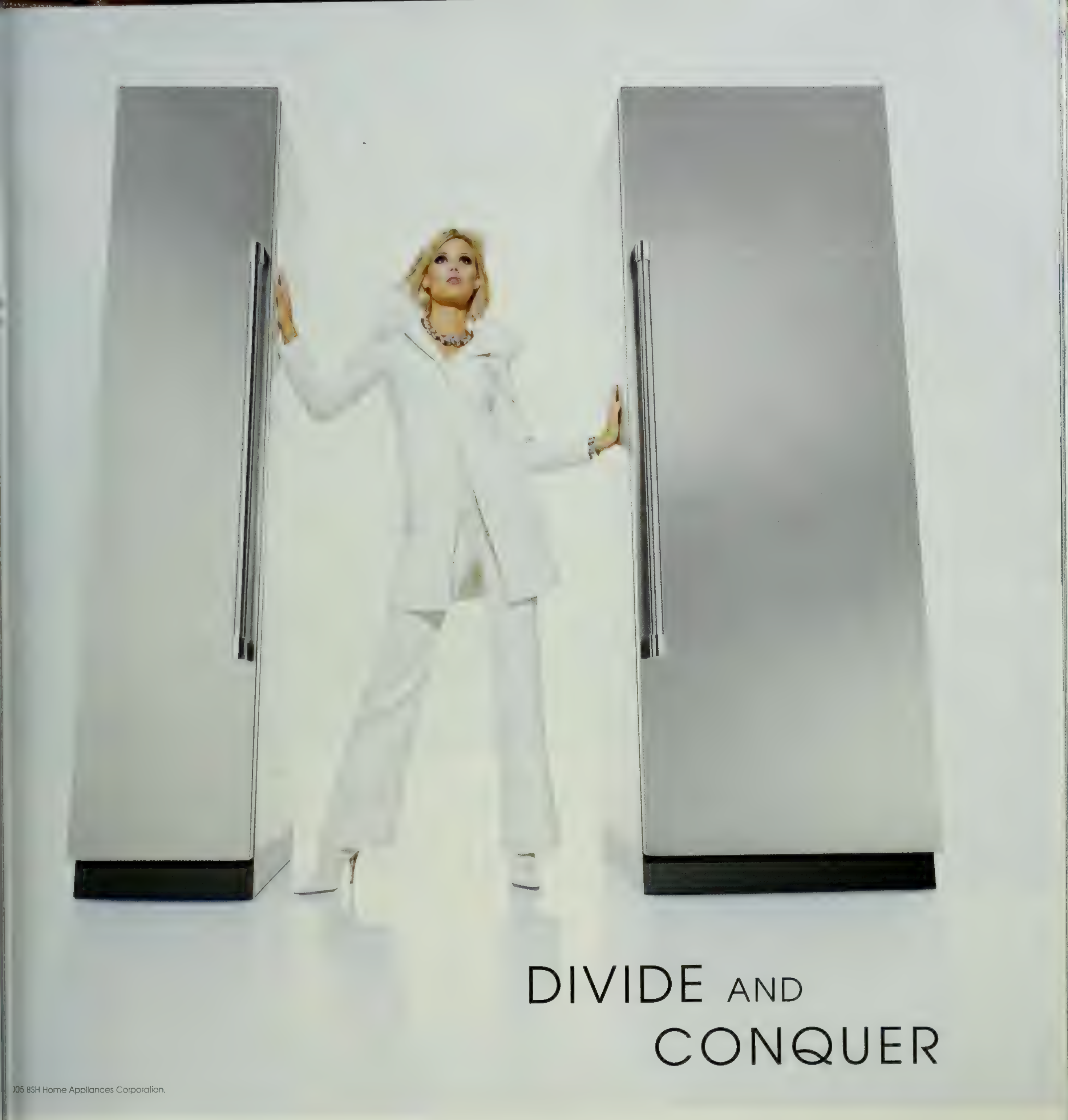


The Spiral Café, which makes seashell references on both the inside and out, functions as public art and and inserts a hint of the organic world into a bustling urban center.

It was just the thing for the developers, The Birmingham Alliance, who had already commissioned both a gleaming ultramodern Selfridges department store by the London firm Future Systems [RECORD, June 2004, page 234], and the restoration of St. Martin's 12th-century facade next door. For the café, Marks Barfield first had to conquer the awkward site—a series of plateaus joined by steps—by expanding one of its flat planes of yorkstone. Then the architects turned to the Fibonacci series and the spiraling geometric growth patterns in nature for the sculptural curves the client was looking for.

A smooth, hand-finished copper skin clads a base frame of eight steel ribs that form the shell. Visible through two glass sidewalls, the ribs, which are covered with plywood along the ceiling, form the building's exposed lateral supports. The whole thing was constructed off-site before being disassembled and brought to its new home in sections. Despite its earthy patina, the building owes a debt to 3D CAD software used for its construction templates. Principal Julia Barfield says conventional renderings would never have allowed them to achieve the spiral shape.

The seashell references continue inside the café with a shimmering ceiling made of thin bronze sheets that mimic a mother-of-pearl interior, and globe-shaped pendant fixtures that emulate pearls. "The developers asked for something between a building with revenue potential and a sculpture," Barfield says. "We gave them a thing between God and Mammon." ■



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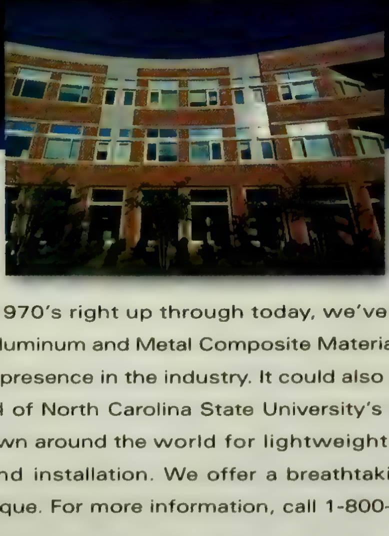

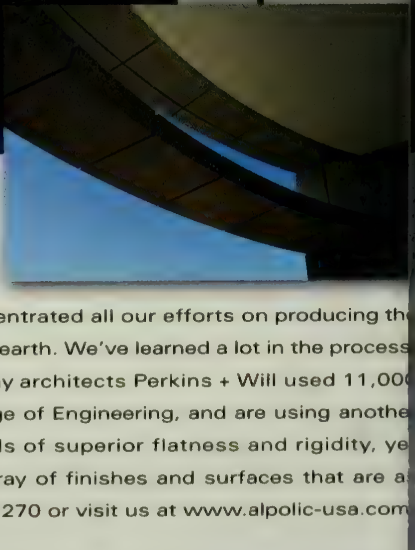

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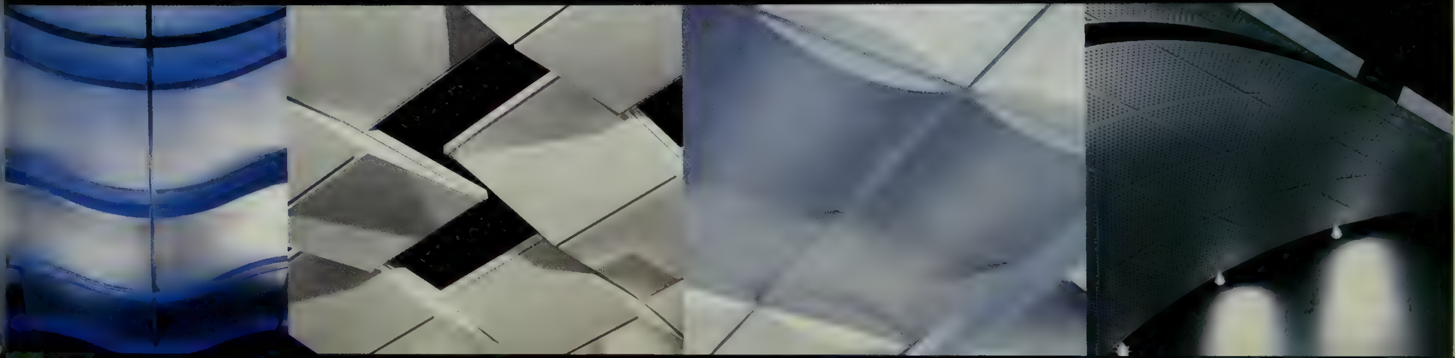

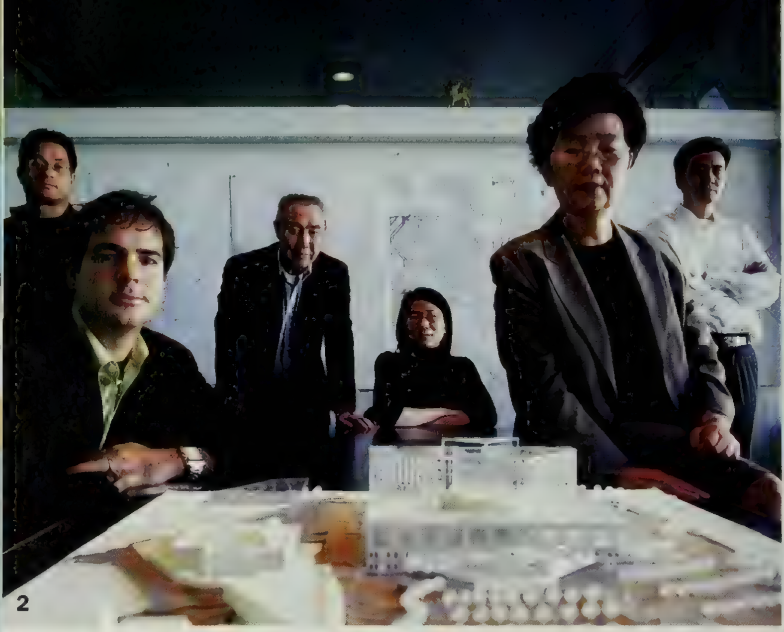

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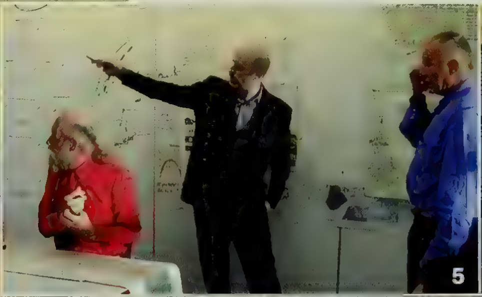


The Museum of Modern Art
6

1. Beyer Blinder Belle and Renzo Piano Studio; 2. Fong and Chan (collaborators with Herzog & de Meuron, not shown); 3. Adamson Associates and Foster and Partners; 4. Helfand Architecture and Elsherz Tellen Projects; 5. Sharples Holden Pasquarelli (SHoP) and Richard Rogers; 6. Yoshio Taniguchi and Kohn Pedersen Fox; 7. Gruzen Samton and Zapata Studio; 8. OMA and LMN

PHOTOGRAPHY: COURTESY BEYER BLINDER BELLE (1); © JOHN LEE PICTURES (2); COURTESY ADAMSON

he Marquee

By Suzanne Stephens

The nature of collaboration in U.S. architectural practice can be fraught with ambiguity. A look at firms engaging in new alignments reveals sensitive areas that need to be addressed.

Unless you have been living in the Truk Islands, you have noticed (or even been a part of) the varied range of collaborations occurring among architectural offices in recent years. We're not talking about collaborations between architects and landscape architects, engineers, or artists—that's another story. Just looking at collaborations between different architectural practices reveals not only certain trends but some particular problems that warrant attention, in order to help create better relationships—and architecture. Up until 15 or so years ago, it was common for many large architectural offices to promote themselves as "full-service" firms handling all phases of the project from design through construction. Smaller offices, usually oriented to design, would join with a production firm for large-scale projects. The collaboration wasn't so collaborative: The design architects would pass the drawings along to the production firm and the two would work out any questions.

But things began to change as the geographic scope and stature of the design architects grew. Today numerous full-service firms ally themselves with a floating crème de la crème of the design world, the so-alled "starchitects" from out of town or overseas, who need to work with architectural offices familiar with local building codes, zoning regulations, and construction practices, besides knowing how to manage the design process and execute well-detailed working drawings. And now boutique operations show a deeper interest and savvy about building techniques and materials, and want to be involved in the construction-document and construction-administration phases. As for the associated full-service firm, it often likes to get in on the schematic design phases. Still, in 2005, when Frank Gehry, FAIA, joined up with Hugh Hardy, FAIA, and his new firm H3Hardy Collaborative, to design the Theater for a New Audience in downtown Brooklyn, the pairing raised eyebrows in the architecture community. Since Hardy has a strong reputation for theater design, not to mention imaginative renovations, and the job was small (299 seats), some wondered why the union was needed.

Hardy explains that Gehry had been recommended by Rem Koolhaas in 2002 when he and his Office of Metropolitan Architecture (OMA) executed a master plan for the Brooklyn Academy of Music Cultural District with Diller Scofidio + Renfro, of which the theater is a part. Although the Theater for a New Audience came to Hardy, he called Gehry and proposed an alliance. "It's good to be challenged by others—it stimulates ideas," says Hardy. Even though Gehry's name comes first in the billing, Hardy claims he doesn't mind: "The alphabetical arrangement helps, of course, but I also know it's sexy for fund-raising."

The various alliances strike many as enlightening and good for business. They also create tensions, misunderstandings, and sometimes out-and-out fights. Yet the new alignments form a trend significantly coloring architectural practice today. Collaborations between the high-design architect and the local architect or a specialist in a building type owe everything and more to increasing economic globalization, and to the glitter effect of a name architect in a celebrity-immersed culture.

Way back when

Just when did this all begin to shift around? Was it when back in 1987 when Gehry, known then for his "chain-link architecture," and David Childs, of Skidmore, Owings & Merrill's New York office, went after the Madison Square Garden competition? The scheme didn't go anywhere, but the architectural community took note of the new bedfellows.

The appearance of the high-design architect—say Frank Lloyd Wright or Le Corbusier—being summoned to take up a major commission in foreign city is hardly new; it happened with Wright in the Imperial Hotel in Tokyo in 1915, and Le Corbusier, in a diminished role at the United Nations headquarters in New York from 1947 to 1953. Nor is the cobbled-together collaboration novel: Around 1954, when Mies van der Rohe came to New York City from Chicago to design the Seagram Building, Kahn and Jacobs was brought in as associate architect to oversee the production phase, and, in an unusual move, Philip Johnson was hired as a "co-design architect." Since Mies didn't have a New York State license at that time, he needed Kahn and Jacobs to sign the drawings. And Johnson, himself in the process of getting his license, was perceived as a proper enough Miesian disciple to carry out the master's design in the event the 68-year-old architect had a tough time making the long commute.

In the post–World War II decades, Eero Saarinen, Edward Durell Stone, and Louis Kahn famously exported their architecture abroad, and by the 1980s, American architects had taken over the world. Then the tide began to turn in the 1990s, as European and Asian architects invaded the U.S., with museums as their noticeable foothold. Added to this has been the desire for American cities and towns—and those abroad—to repeat the Bilbao experience, where Frank Gehry's Guggenheim Museum in 1997 transformed a decrepit downtown into a tourist attraction. Now both American and European superdesigners are airlifted into U.S. cities and towns to revitalize them with spectacular architecture. These "names" seek to ally themselves with an office they can trust to carry out their ideas, while their clients naturally want someone at their beck and call.

Box office bonanza

Today's clients of architecture, like Hollywood studios, find great appeal in box-office names and, as several architects note, are more willing to pay higher architectural fees when a star is involved. It makes it easier to raise money for cultural projects, and private developers are even betting on name designers to sell condominiums.

The joined-up architects can do well financially: A fee for architectural services could be, for example, 6 percent of construction plus 15 percent over prime because, so the argument goes, the client is getting two quality architects almost for the price of one.

It should be underscored that box-office architecture hardly means the star architects get tons more money than anyone else. Indeed, the supporting cast—the collaborating architects—often get 60 percent of the architectural fee, compared to the design architects' 40 percent. In many cases that fee is split 50-50, with the associated architect in charge of check writing. Says David Fong, AIA, of Fong & Chan, in San Francisco, which has associated with Norman Foster, Robert A.M. Stern Architects, and lately Herzog & de Meuron on the de Young Museum, "Herzog & de Meuron was a bit reluctant about our getting more money. But we held the contract and we get the lawsuit if anything goes wrong." Ronnette Riley, FAIA, whose design-oriented New York firm has collaborated with other design offices, adds, "The pay scale and rent in a particular city like New York add to the cost of doing business. You have to factor this into your calculations when splitting the fee with an out-of-town architect."

For the newly expanded Morgan Library and Museum, in New York City, Renzo Piano Studio was designated the design architect, and Beyer Blinder Belle Architects and Planners, the executive architect/architect of record.

Embedding architects

Electronic mail may help in overseas working relationships, but it isn't everything: design architects and their collaborating architects often place their respective staffs in each other's offices during the phases of schematic design, design development, construction documentation, and construction supervision. Gruzen Samton, which associated with Bernard Tschumi, AIA (then dean of Columbia University's Graduate School of Architecture, Preservation and Planning), for Columbia's Lerner Hall [RECORD, November 1999, page 94], sent architects to Tschumi's office at the beginning of the schematic-design phase. "We were all looking at various alternatives, with lots of sketches," says Samton. "Bernard had a lot of former students from Columbia who could work on one project at a time, 24/7." During the middle of design development, Tschumi sent architects over to Gruzen Samton. "We use a form that indicates who is going to spend how many hours, with the rates and the profits. It was eye-opening to encounter design architects with the luxury of having more time per project, and staffed with young architects willing to work weekends and nights without extra pay."

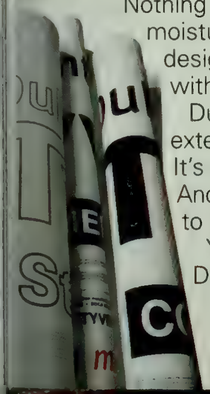
The sharing procedure gets more complicated if the star architect only has overseas offices. Bruce Fowle, FAIA, whose firm FXFowle (formerly Fox & Fowle) is the executive architect for Renzo Piano Building Workshop for the New York Times tower, now in construction in New York City, reports that the two firms set up a schedule where they would meet one month in Piano's Paris office and the next month in FXFowle's New York office. Piano placed two or three people in Fowle's office in the construction document phase and at least one person in construction administration phase, mainly to check shop drawings.

A similar embedding of staff occurred when Beyer Blinder Belle (BBB), architects whose design reputation is built on the renovation of major landmarks, collaborated with Piano on the newly expanded Morgan Library and Museum. BBB had already come up with a master plan and programming for the Morgan in 1998, which also sought its expertise in restoring three historic buildings in the Morgan complex and in getting the project through potentially contentious landmark hearings. During the schematic design phase, BBB went to Piano's office every six to eight weeks. At the end of the design development, BBB sent two people over for a week just to make sure the development drawings contained the amount of detail Americans like. During the construction document phase, visits reversed: Piano partner Giorgio Bianchi was in BBB's office one week every month, and a younger architect from Piano's office came to BBB full-time during this and the construction administration phase. Piano got more than half of the fees, BBB partner Richard Southwick, AIA, recalls. But then the Morgan had separate contracts with each architectural office, so that there was no prime architect (in the sense of holding the contract), nor a sub (in the sense of being paid by the architect who held the contract). Leo A Daly's experience as executive architect to Rafael Moneo for the Cathedral of Our Lady of the Angels in Los Angeles [RECORD, November 2002, page 124], included providing Moneo's Madrid office with computers, recalls Leo A. Daly III, FAIA. "We also had a Spanish-speaking team from Daly working with Moneo in Madrid before the operation moved to our L.A. office."

Terms of engagement

Obviously, collaborating architects such as Gruzen Samton , FXFowle, and Beyer Blinder Belle, all with solid design reputations in the commercial buildings, or in the case of BBB, restoration, would want a title that reflects the scope of its input. But the titles are ambiguous, and not systematically codified. Furthermore, they have been shifting in nuance over the past 30 or 40 years. In the old days, collaborating architects were called the *architect of record*, or the *associate architect*. It generally meant the architect stamped the drawings and acted as the local representative, while being liable for any failures in the building. And even though the design architect's name came first, the architect of record or associate architect would usually hold the contract with the client. "The title 'associate architect' proved semantically fuzzy," says BBB's Southwick, although it sounds to him more involved in the process than architect of record.

But now executive architect is the "term du jour," Southwick says, who thinks it implies a slightly larger role. (With the Morgan, the firm opted for both executive architect and architect of record.) Alex Ward, AIA, until recently with Leo A Daly, feels that associate architect typically means "two firms are sharing responsibility more equally from start to finish." Firm principal Daly explains that his firm uses executive architect quite often: "We think of ourselves as the lead architect, since we take responsi-



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bility, and the design architect is the sub." Doug Frey, AIA, of Herbert Lewis Kruse and Blunck in Des Moines observes that executive architect strikes some as better for marketing, even though his firm, HLKB, opted to be called architect of record on the Figge Museum in Davenport Iowa [RECORD, November 2005, page 116], designed by English architect David Chipperfield. HLKB teamed up with Chipperfield again for the recently opened Des Moines Library, still with the same title. Executive architect sounds too administrative for Frey. "We had a hands-on kind of collaboration with Chipperfield," he says.

When it comes to titles, it's a *ragoût ambigu*, although architect of record clearly defines the party with the liability—and often the sole contract with the client. Another working relationship that is very defined but rare because of the hassle involved in setting it up is the joint venture, a legal entity in which the design architect and the collaborating architect form a separate business for their joint firms, which has its own contract with the client, its own accounting setup, plus highly detailed stipulations of the services provided by each party. In the Seattle Central Library [RECORD, July 2004, page 98], Rem Koolhaas and his Rotterdam-based firm OMA hooked up with Seattle architects LMN in a joint venture. "It was Rem's preference," says LMN's John Nesholm, FAIA, about the idea. "He wished to have both firms involved for the entire duration and felt the joint venture would assure this." Nesholm wonders if the legal twinning is an unnecessary complication, and notes that when LMN Architects, a firm known for convention centers, works with architects outside Seattle, it is called the design architect, while "the other title is up to the home firm."

At Swarthmore College's Unified Science Center in Swarthmore, Pennsylvania, the credits read "Einhorn Yaffee Prescott and Helfand Architecture, architects in association"—although Helfand is design architect.

Unusual titles appeared in the credits for the de Young Museum in San Francisco designed by Swiss architects Herzog & de Meuron [RECORD, November 2005, page 104]. The Basel-based firm was called the *primary design architect* and Fong & Chan, with whom it associated, was labeled *principal architect*. No wonder things are confusing. David Fong insists the museum wanted the title to relate to Fong & Chan's responsibilities. "We do large work on time, on budget, and with a tiny percentage of change orders because we know how to manage a project," he emphasizes, explaining that the museum was naturally nervous about the budget. "The change orders for de Young were a low 2.8 percent—unheard of," he adds.

Credit: a sticky wicket

Credits can be a source of contention, and it is more than wise to clarify them from the beginning. But even then there are problems. When Margaret Helfand, FAIA , a New York–based architect with her own office took on the role as the design architect for the Unified Science Center at Swarthmore College in Swarthmore, Pennsylvania, Einhorn Yaffee Prescott (EYP), a Boston-based a/e firm, had already been contracted to do the programming, and because of its expertise in lab design, had embarked on some early planning for the center. The college, for which Helfand had already designed a building, wanted Helfand to be brought in on the design for the center. In her discussions with Cahal Stephens, AIA, principal in charge of the project for EYP, Helfand turned down the role of "design consultant," since she felt her firm should be involved equally all through construction documents and construction administration, to fully implement its concept and details. At the outset, she agreed to the credit line, "Einhorn Yaffee Prescott and Helfand Architecture, architects in association." Soon Helfand realized this was a mistake: "When our name comes second to EYP on the credits, there is confusion about who deserves credit for the design. We have already experienced disbelief at interviews when we present the science center to selection committee members who have seen the project published with EYP's name first. Obviously they assumed EYP was the lead designer."

Helfand enjoyed working with EYP and notes that the firm "was always very respectful of us during the design process." But she confesses, "I was more concerned with building a strong working relationship with EYP than with the marketing consequences of the project credits." A recent promotional postcard sent out by EYP touted the building's publications and awards, but EYP got the large type while Helfand Architecture is mentioned only in a credit line in six-point type at the bottom right-hand corner of the elongated card. It isn't just about ego, says Helfand. "For design firms, this is about earning access to opportunities to design more buildings." Cahal Stephens replies that EYP was "prime in terms of the agreement with the client." Although prime architect does not mean design architect, he feels the two firms had worked out the wording very carefully. Meanwhile, EYP has agreed to collaborate with Studio Daniel Libeskind for an arts center project in Boston. This time, it is a joint venture, and EYP has second billing. "Libeskind won the competition and it was his idea to do the joint venture," Stephens explains.

Problems with the press

No matter how often architects work out the credits for a job, they find that the press ignores all names except the most famous one. Case in point: The actual architect listing for the Seattle Central Library reads OMA/LMN, a joint venture. Few people would be able to say they knew that, since Rem Koolhaas, principal of OMA, is cited to the exclusion of anyone else. When Ronnette Riley decided to collaborate with Bohlin Cywinski Jackson on the Apple Store in New York City's SoHo [RECORD, October 2002, page 156], she found two magazines, *Business Week* and *Contract*, neglected to mention her firm. Peter Samton still smarts over Gruzen Samton's being left out of the credits for Columbia's Lerner Hall in a book, *New New York, Architecture of a City*, edited by Ian Luna (Rizzoli, 2003). The complaints go on. Even when the collaborating firm is listed, it is assumed the second firm played a lesser role—especially in design. Says Riley about the Apple Store, "Apple is the most collaborative project we have ever worked on—from concept through construction … This is the reason credit should be a number one concern with the AIA."

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For Horizen, a residential tower in Manhattan, Carlos Zapata Studio, newly located in New York, teamed up with Gruzen Samton. Zapata is the design architect; Gruzen Samton the architect of record.

Riley, who serves on the AIA National Design Committee, is spearheading an effort by the committee to produce a book advising architects about collaboration—with advice not just about credits and listing in promotional materials, but the entire scope of the working process. "There are other issues that need to be resolved," she says. "For example, who is going to have the relationship with the client? And when you have a disagreement over a certain point, say on the detailing, who has the final say, and when?" Riley maintains the main problem is developing an understanding of what was the creative element in the project—and who was responsible for it.

The upside of marriage

Other architects emphasize that a successful collaboration does depend on how much is understood and spelled out from the beginning. (One architect, who wishes to remain anonymous for business reasons, relates that some firms require the Myers-Briggs psychological testing before engaging in a collaboration.) In spite of pitfalls, including working with architects who are in the air all the time, the advantages of collaborating with a "star" include the chance to be involved in the creation of a major landmark of the era. A small design firm may choose to ally itself with a mega-star to get on a larger playing field. In 2004, the Richard Rogers Partnership of London agreed to team up with a young innovative design firm, Sharples Holden Pasquarelli (SHoP) of New York, and engineers at Buro Happold's New York office, in going after the city-sponsored East River Waterfront Study. As SHoP principal Gregg Pasquarelli explains, "We wanted the job, and Rogers had a great office and name, so some engineers at Buro Happold, who knew him, called him up. He looked at our work and agreed."

Many large, full-service firms view conjunctions with the stars as advantageous in attracting a plum commissions, and whether they sell themselves as design architects or not, admit that joining up with star architects makes a difference. According to Alex Ward, "The star phenomenon is getting stronger: it is the new reality." Large firms also find that the uninhibited nature of the avant-garde architects, European or American, is energizing: As Alex Richter of Adamson Associates of Toronto, which is the associate architect for Foster and Partners on the Hearst Tower, says, "How many people can say they have crawled into the heads of these innovative architects?" Brian Klipp, FAIA, whose Denver firm, Klipp, functions as a design architect but has associated with out-of-towners Michael Graves, FAIA, and Robert A.M. Stern, FAIA, and Steven Holl, FAIA (the last on the just-announced Denver Justice Center Courthouse for which Ricci Greene Associates, a New York specialist in court house design, is also on board), says simply, "Our staff is exposed to minds of architects who are not in Denver." Klipp also adds, "Not only do our employees learn from the exchange, but the 'name' architects are often surprised that they learn from us." Samton, whose firm has teamed up with the New York–based Carlos Zapata Studio on a residential tower called Horizen [sic] in Manhattan—as well as Thom Mayne for a new academic building at The Cooper Union for the Advancement of Science and Art, also in the city—says it's enlightening to see how the different minds work.

Collaboration is definitely a trend, most feel, although some look forward to the day when the backlash hits. So what's the best way to be happy if you team up but come second in the credits? It depends to a large degree on your firm image. Richter of Adamson says, "It's only a problem if the ego gets involved. We try to enhance the vision of the name architect and keep the integrity of the concept." He also observes that some architects "go into associations for the wrong reason; for example, to open up new markets. You need to love to collaborate—to support, not compete." This would not sit well with some of his colleagues.

When Kohn Pedersen Fox (KPF), which has strong design reputation in the commercial world, signed on as executive architect with Yoshio Taniguchi on the Museum of Modern Art [RECORD, January 2005, page 94], the architecture community wondered why. Would they be good at this sort of thing, others mused. It was the first time, says managing principal Gregory Clement, FAIA, and probably the last that KPF would do this. KPF was convinced to come in largely because of its relationship to Jerry Speyer of Tishman Speyer who was a trustee of the museum and head of its building committee. Clement argues that his firm saw this as a "tremendous opportunity to work on a great museum" and thought it might give the firm an edge to design more museums. ("The results aren't tangible yet," he notes.) While the two firms had separate contracts with the museum, and Clement describes the relationship as great, "Credits are still a sore point—especially on a high-profile project," he says. He is one of many to voice a fear of being typecast as a supporting player. Samton remarks that the firm's younger staff doesn't always like to "play second fiddle."

It's still about credits. It won't be resolved easily—especially in situations where design architects decide to act as associate architects to other design architects. It takes serious discussion and thinking from the beginning. Although the AIA has guidelines on crediting, they are limited. As Riley sums it up, "The AIA should develop a standardized form for the provision of credit, and the recognition for intellectual property provided by the architects." And then you just have to make sure everyone follows it—but you also have to face the fact that no matter how you try to resolve the credit situation, one name comes first and the press tends to glom onto that. ■

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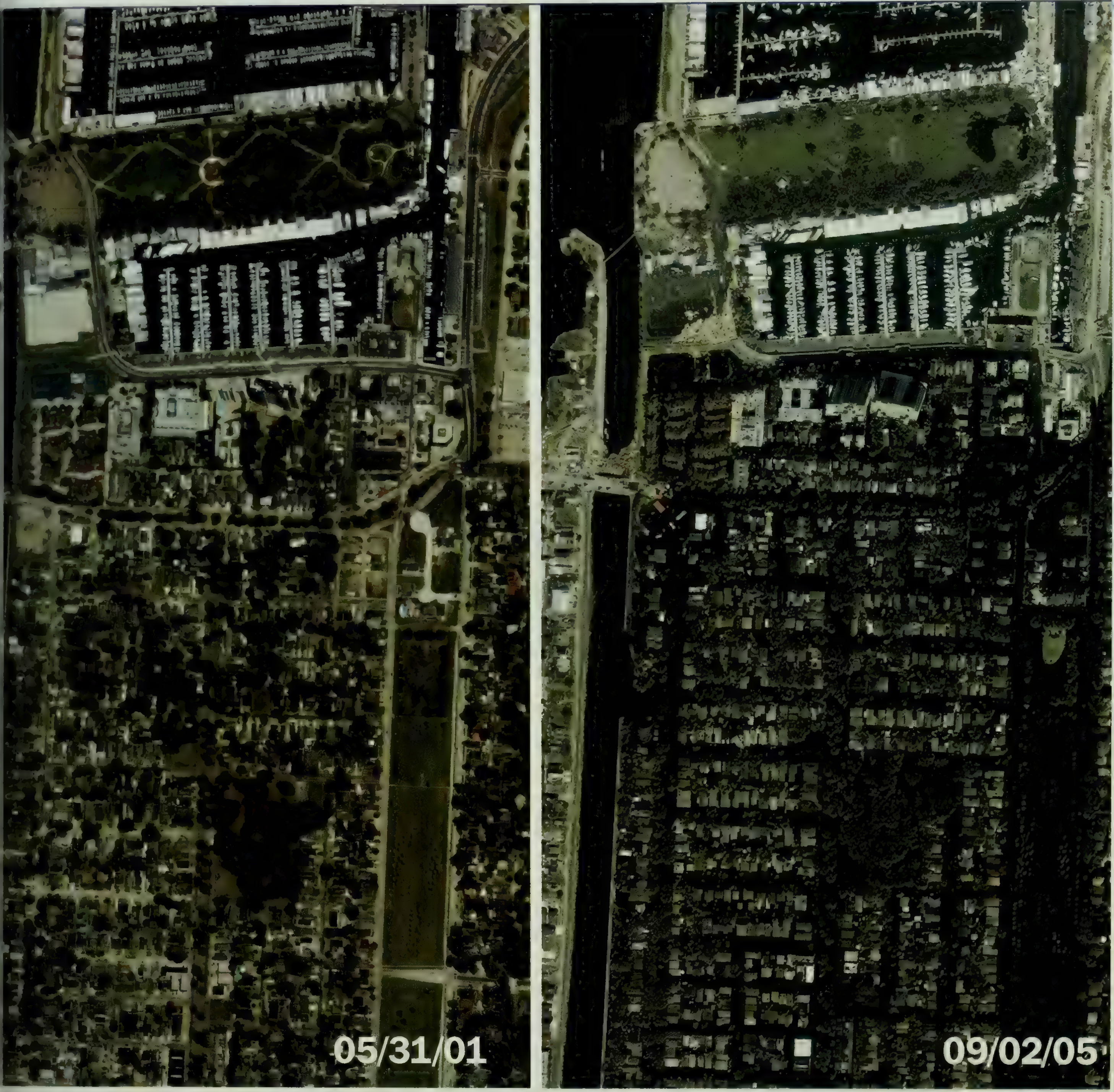
Architects and related professionals have found themselves both heroes and victims in the storms of emotion and politicking that have engulfed rebuilding after Hurricane Katrina, whether amid the flooded streets of New Orleans or the flattened 70-mile swath of the Mississippi Gulf Coast. RECORD recognizes the rebuilding's challenges, both for the nation and for the profession, in an editorial effort that extends well beyond the pages that follow. With the vastness of the destruction and the predictable recurrence of storms, RECORD conceived two ideas competitions to spur rebuilding that fully engages what promises to be a difficult future. Tulane University became our willing partner. On the following pages, we present 10 winners in one contest asking professionals to rethink multifamily housing for today's New Orleans (page 116), and another inviting students to propose a prototype infill house (page 124). New Orleanians have already expressed gratitude for the wealth of insight in the contest's 544 entries. In two feature stories, we show how professionals are dealing with the post-Katrina era's dilemmas. "Can New Orleans and the Gulf Coast Face the Hard Questions?" (page 130) shows architects themselves caught between their ideals and the present's more pressingly mundane demands—like where to find kitchen cabinets for a homeless family. Holland has long been the world's flood-control expert, but in"Why the Dutch are Dismantling Their Famous Dikes" (page 140), Tracy Metz explains how the Netherlands will try to live with—or in—water. Most importantly, rebuilding the Gulf Coast after Katrina will demand America's compassion and its ingenuity for years to come. *James S. Russell, AIA*

In two groundbreaking housing competitions, RECORD presents winning projects that tackle the diverse design and planning issues that challenge America 10 months after its worst modern disaster. Two feature stories explore the questions that remain.

Building a Bette



Aerial photographs of New Orleans taken on May 31, 2001 (left), and September 2, 2005 (right).

Gulf South

Robert Ivy led a jury discussion (above), and Tulane's Scott Bernhard answered the multifamily jury's questions at the site (below two). Both juries posed (left) with Tulane's Dean Reed Kroloff.

Designing the Future of New Orleans

ARCHITECTURAL RECORD and Tulane University host two ideas competitions

Can houses and apartments rise gracefully above floodwaters while maintaining New Orleans's famous neighborliness? Can higher ground successfully accommodate more of the city's citizens in an environmentally sustainable way? Both students and professionals offered a wealth of answers in the 544 entries for two competitions initiated by ARCHITECTURAL RECORD in a partnership with Tulane University's School of Architecture. The High Density on the High Ground Competition asked professionals to propose a 160-unit housing project on an actual development site, while student competitors in the New Orleans Prototype House Competition designed a three-bedroom house that could adapt to a variety of conditions. Tulane architecture dean Reed Kroloff presided over the judging, while Scott Bernhard and Carrie Bernhard wrote the programs and co-coordinated the competitions, aided by numerous student volunteers from Tulane. For two days, the nine-member jury winnowed entries in galleries provided by the New Orleans Museum of Art. Almost every scheme took seriously the request to eschew visionary ideas in favor of practical ways to address the city's real housing crisis. The winners, a group of citations, and additional selection of projects proposed by the jury went on exhibition in New Orleans in April and May at the Ogden Museum of Southern Art. Some will travel to the AIA National Convention in Los Angeles this month and will be displayed in the fall in the U.S. Pavilion at the 10th International Architectural Exhibition, in Venice, Italy. *J.S.R.*

High Density on the High Ground Competition

New Orleans may need to incorporate high-density housing if certain parts of the city prove unsafe to build back. A city-block-size site in Bywater, a mid-19th-century neighborhood downriver from the French Quarter, offered a suitably challenging site for this competition. It's a bit elevated and hard against the Mississippi levee; north, across Chartres Street, a mix of shotgun houses and Creole cottages has only begun to see gentrification. The program included 160 units, which could vary widely in size from 700 to 2,100 square feet, as well as 15,000 square feet of retail and a 5,000-square-foot "city center" studio space for Tulane. Open to everyone, the competition drew entries from students and professional design firms. One team, among those cited in the following pages, were simply three friends who recently graduated from Harvard's Graduate School of Design and decided to collaborate. Juror Mario Gooden said, "I was looking for moments that spoke to how people live next to each other, how they watch out for each other." *J.S.R.*

> "YOU FEEL THAT THE HOUSING IS EMBEDDED IN THE COMMUNAL SPACES, EVEN WHEN IT IS ELEVATED."
> —*DUMEZ*

"I was looking for projects that get you up to the river," commented Juror Mabel Wilson.

"I've learned a lot about how hispanics use housing," said Juror Eric Naslund. "But good housing works for everyone."

> "IN HOUSING, SEEING THE KIDS OUTSIDE THE KITCHEN WINDOW IS VERY IMPORTANT."
> —*NASLUND*

The Jurors

Eric Naslund, FAIA
A design partner in Studio E Architects in San Diego, Naslund has designed numerous award-winning affordable and infill housing projects. He teaches at Woodbury University, San Diego.

Mario Gooden
Gooden, who has worked for both Zaha Hadid and Steven Holl, is now a partner in Huff and Gooden in Charleston, S.C. He also teaches at Yale University.

Steve Dumez, AIA
A partner in New Orleans–based firm Eskew+Dumez+Ripple, Dumez collaborates on environmentally oriented projects ranging from laboratories and museums to interpretive centers and aquariums.

Mabel Wilson
In San Francisco, Wilson is a professor at the California College of the Arts, and she is also a principal at KW:a in Oakland.

Sean Cummings
A real estate developer, Cummings is president of Ekistics, Inc., in New Orleans. He will develop the site of the competition. He has also worked for a lower-income neighborhood foundation in London.

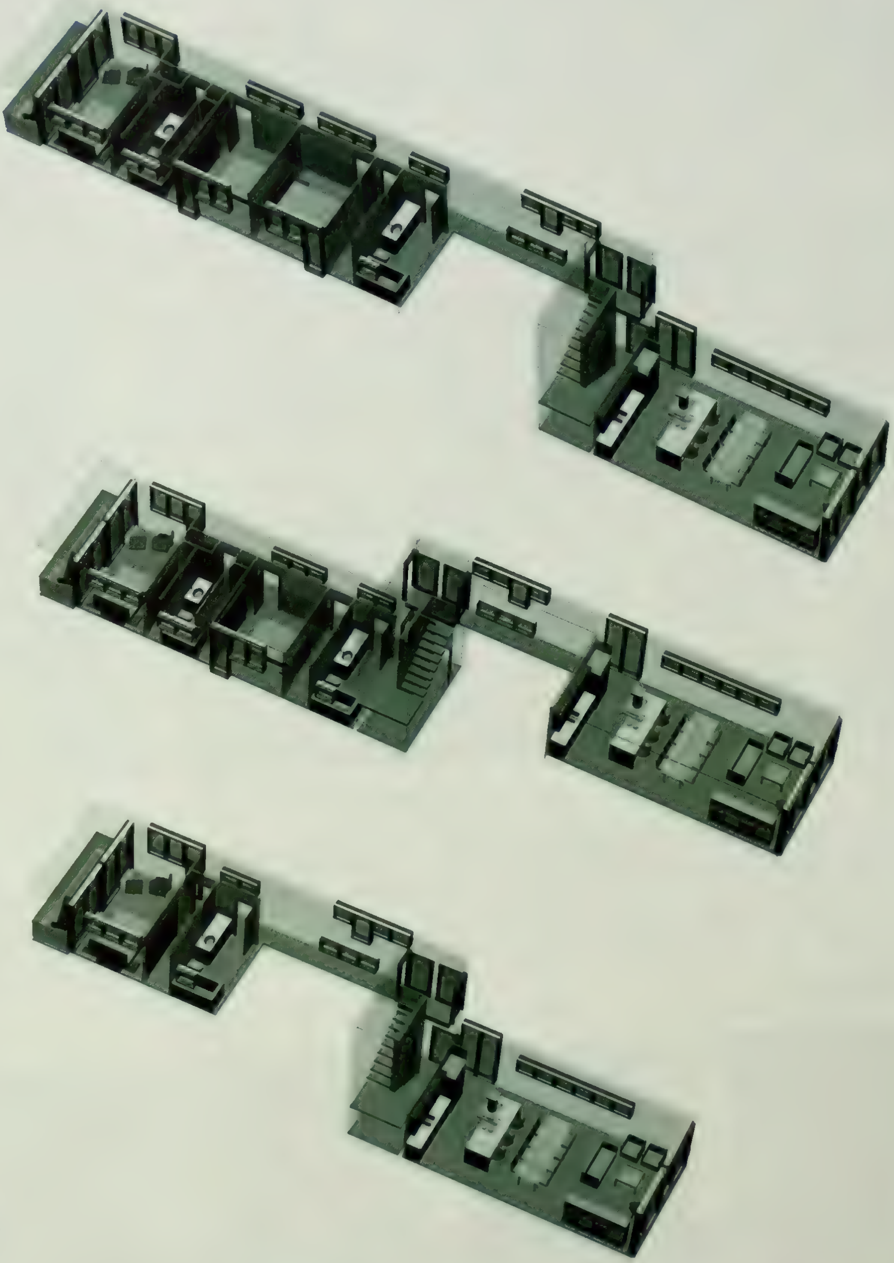
HONOR AWARD

Eight Inc.
San Francisco
Tim Kobe, principal, with Doo Ho Lee,
Ryoji Karube, Jeff Straesser, Jie Siang Yong,
David Herman, BJ Siegel

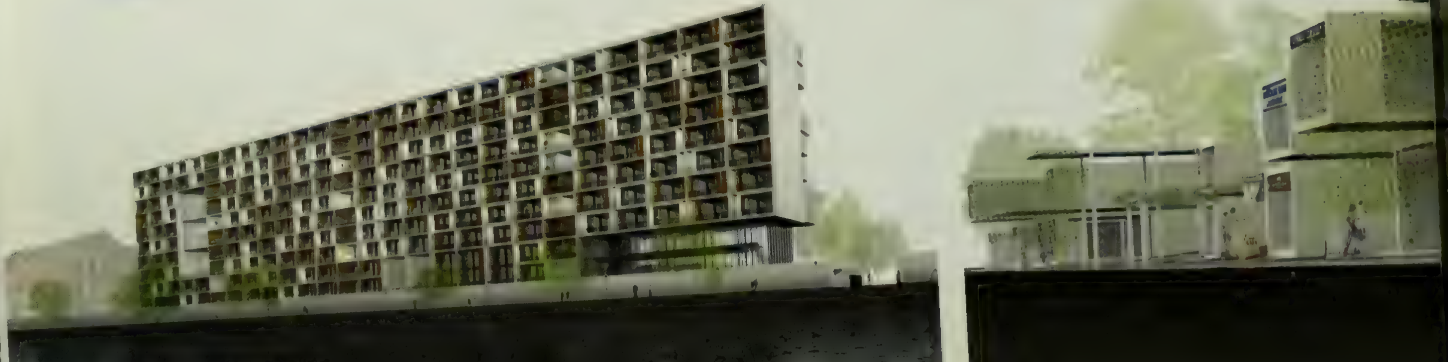
Concept: A slab tower places all 160 units next to the levee, moving the bulk away from low-rise Bywater, and offering every unit a river view—a rarity in New Orleans.

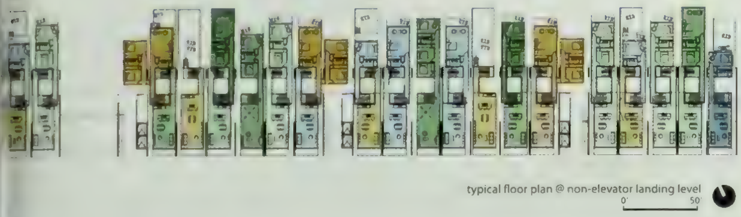
Each unit can be unique because prefabrication would lower the costs of customization. Fabricated off-site, the units fit within the 12-story framework. The variety accounts for the "sawtooth" nature of the north elevation, which faces the neighborhood. Some units are left out to bring breezes and views of the sky through the long slab structure. According to Eight, Inc., the scheme's diversity and additive quality reflects the variety found in the nearby streets, while the tough simplicity of its expression "draws inspiration from its riverfront site, with its tough physical elements: flood walls, train tracks, and remnants of the old wharf structures."

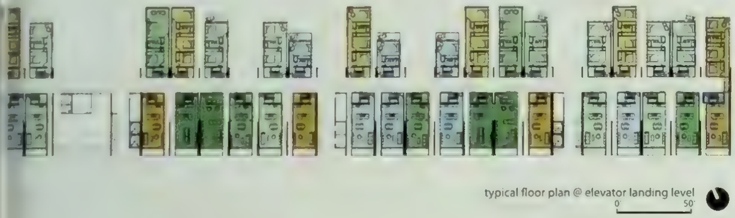
The sawtooth scheme recurs at street level, where low, projecting structures, containing retail and institutional areas, alternate with ball courts and small public plazas. The plazas access a riverfront terrace. The low-rise "makes a fine-grained relationship between neighborhood and site," said Steve Dumez. "Allowing the public spaces to filter into the site is a significant virtue." Though the units "string out long rooms," taking "the shotgun idea too far," said Eric Naslund, he admired the way "every unit has a city side and river side." *J.S.R.*



"PUBLIC SPACES
FILTER INTO THE SITE."
—DUMEZ




typical floor plan @ non-elevator landing level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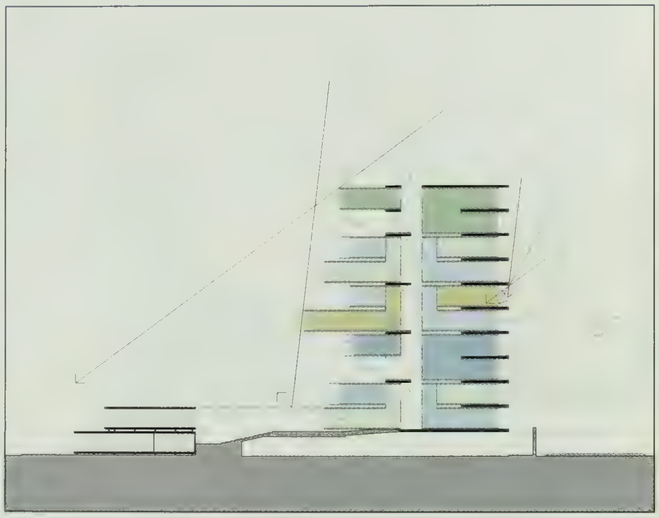
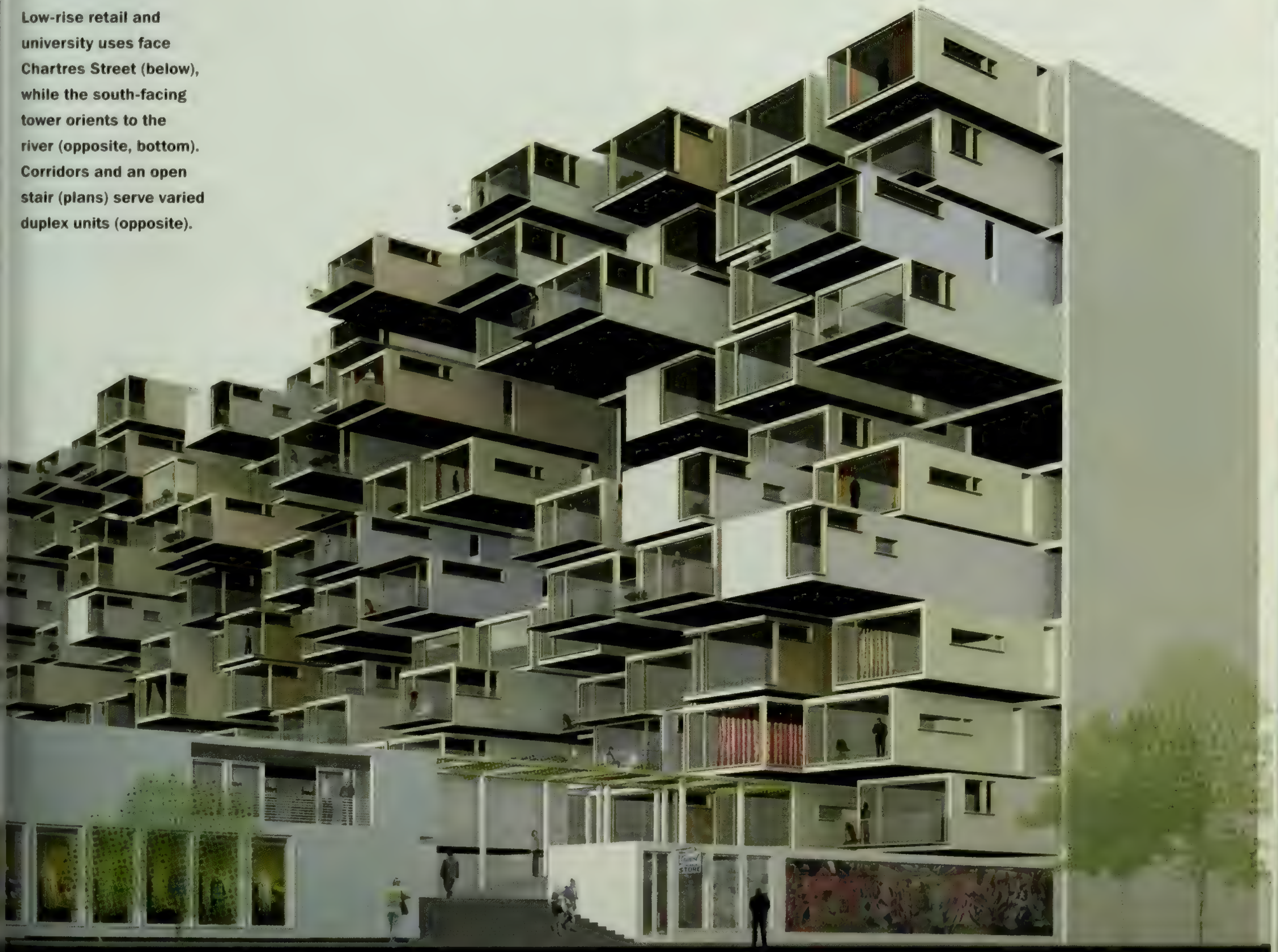


Low-rise retail and university uses face Chartres Street (below), while the south-facing tower orients to the river (opposite, bottom). Corridors and an open stair (plans) serve varied duplex units (opposite).



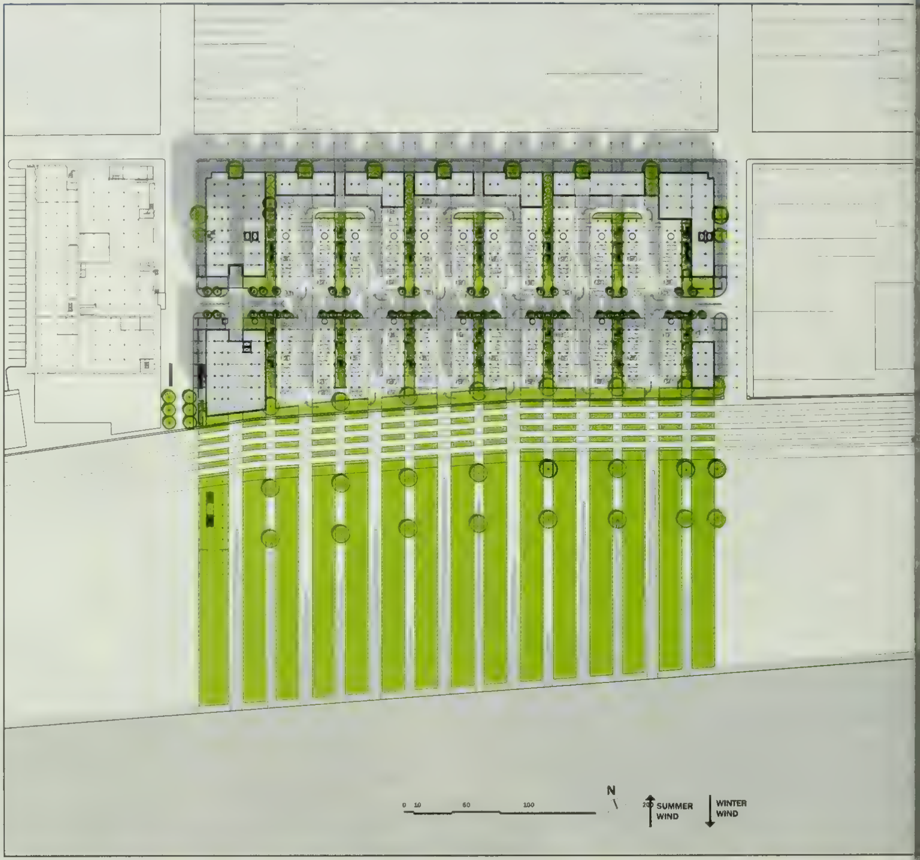
HONOR AWARD

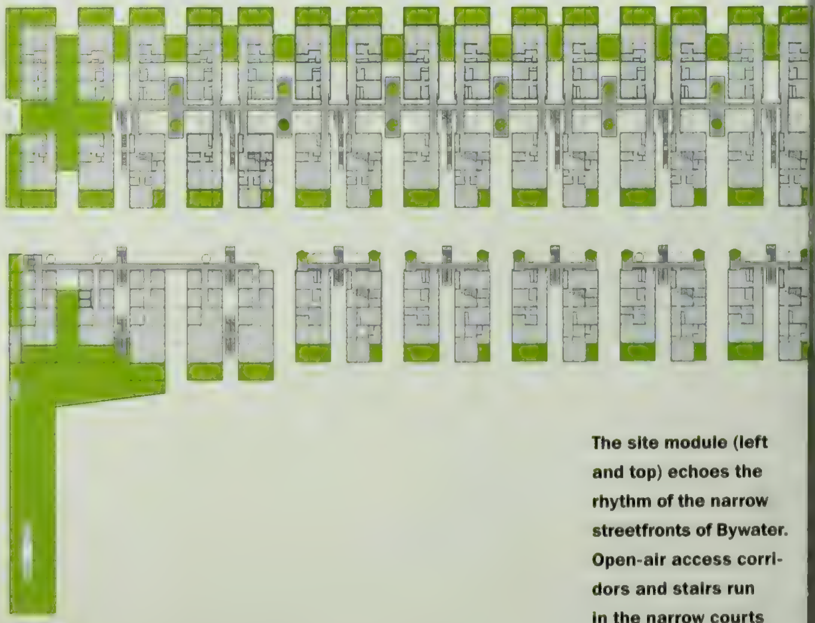
Anderson Anderson Architecture
San Francisco
Mark Anderson, Peter Anderson, Kylie Moss, Aaron Brumo, Alan Owings, Brent Sumida, Dennis Oshiro, Ji young Chung, Rita Sio

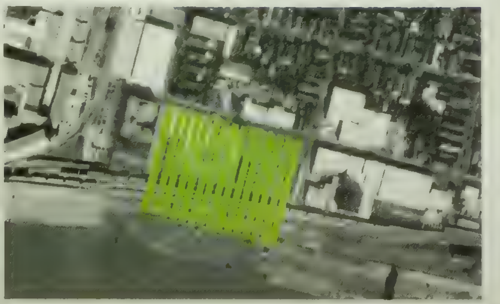
Title: Camel Back Shot Gun Sponge Garden
Concept: The team gridded the site into one-unit-wide modules that alternate with narrow, full-height light courts so that filtered light and ventilation can reach all four sides of every unit. The module extends south across the levee as an "alluvial comb," an armature that captures sediment from the river, allowing reestablishment of a natural river edge. Retail and institutional uses face Chartres Street at grade and wrap the block to the west, stepping up to a pedestrian bridge that spans the rail right of way.

Both the lower-level concrete structure and the steel-framed residential units would be prefabricated. Roofs and walls route rainwater to planted decks (evoking the gardened upper-level porches of the French Quarter) to absorb runoff. The louver-faced, structurally insulated panel system also filters rain and supports planting, eventually literally becoming a "green" wall. The extensive greenery and many open porches dissolve the structure's bulk. Dumez appreciated the "porosity of the grain across the site. The narrow, deep spaces and the play in the overhanging, cantilevered parts are like those found in New Orleans types." Added Naslund, "Light filters down from top to bottom," which, Mabel Wilson agreed, makes it "more porous" and, said Mario Gooden, adds "variability and ambiguity." *J.S.R.*

"ADMIRABLE MOVEMENT
OF AIR AND LIGHT."
—*CUMMINGS*

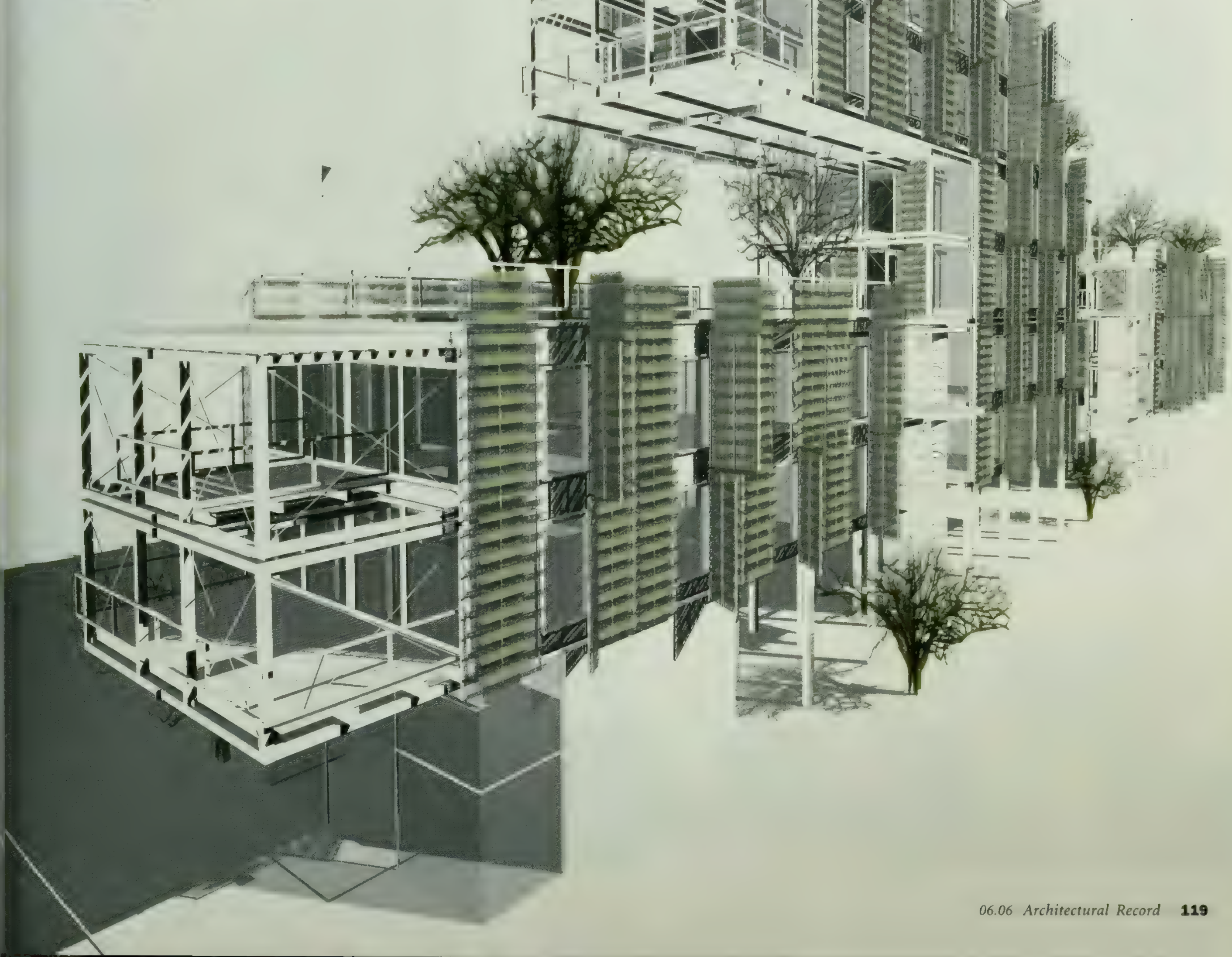






The site module (left and top) echoes the rhythm of the narrow streetfronts of Bywater. Open-air access corridors and stairs run in the narrow courts between the units.

The cantilevered wings, plant-supporting wall panels, and numerous covered porches (left and below) create a rich dappling of sun and shade (right).



CITATION

Justin Laskin and Kathleen Mark
University of Virginia, Charlottesville,
with Maurice Cox, studio instructor

Title: neighborhood_river_place

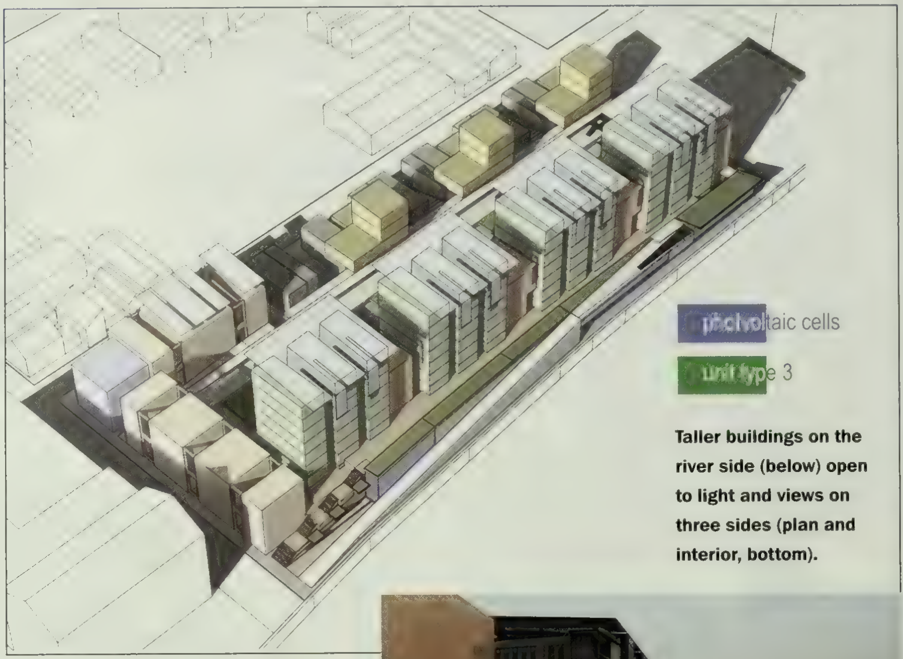
Concept: In low-rise blocks facing Chartres Street, residential units share street frontage with "corner store" retail spaces. Two broad open stairs and a ramp interrupt the street frontage and lead up to a planted public courtyard terrace over the parking area. It's enlivened by a market, restaurant, and outdoor cafe.

Four mid-rise residential blocks face the river. Passages from the courtyard open to a public space lining the river that ramps up to a terrace overlook.

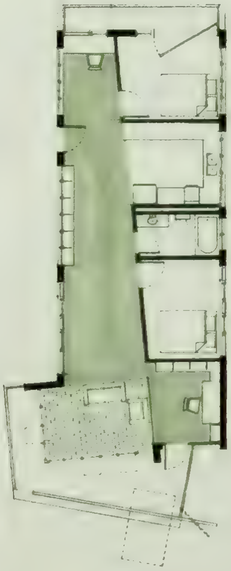
Each tower is slotted to expose every unit to light and air on more than one side. A roof-mounted photovoltaic array offers shading, while louvered panels protect the river-facing interiors from sun while letting in breezes.

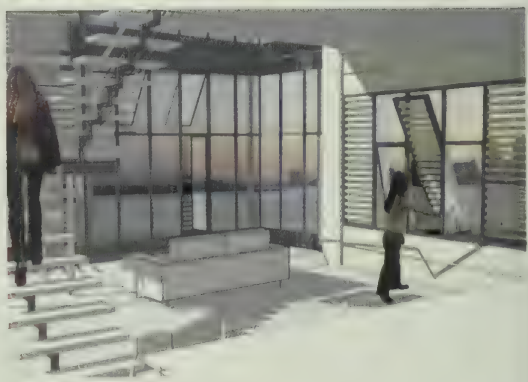
"Some winners raised more questions and pushed innovation harder," said Naslund, "but this one has a clear diagram, a sensitive placement on site, and intriguing use of cross ventilation." Added Gooden, "Lots of things about this are familiar, but it had a much stronger resolution than others that went in the same direction." Wilson described the design as "very livable." *J.S.R.*

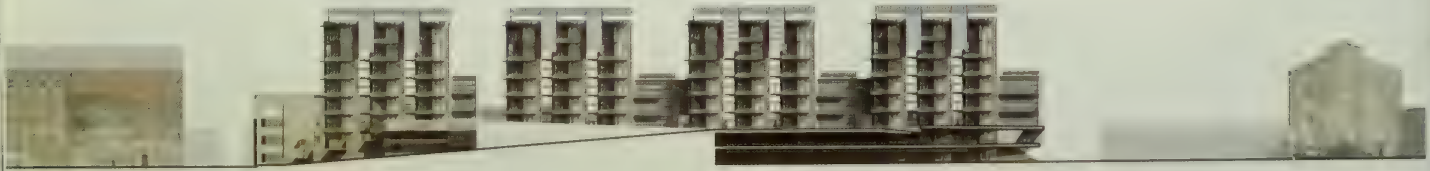
> "IT OFFERS A PRETTY GOOD WAY TO GET TO THE RIVER."
> —*NASLUND*



Taller buildings on the river side (below) open to light and views on three sides (plan and interior, bottom).







CITATION

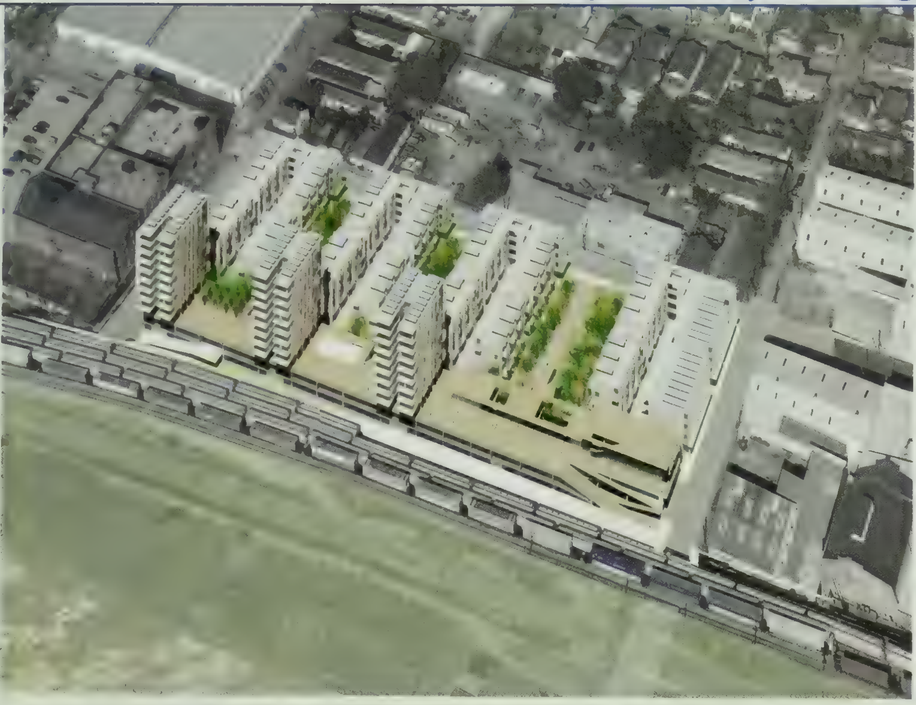
Duong Bui, Erkin Özay,
Pars Kibarer
Cambridge, Mass., and Istanbul

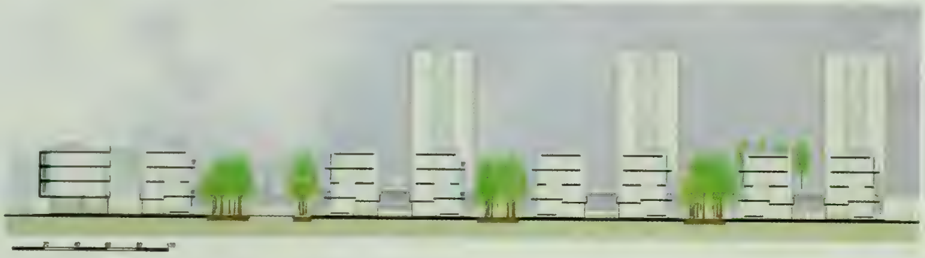
Concept: The Bywater neighborhood opens into the development through three generous courtyards, lined by multilevel town houses. The ground level can be used for a home business and opens to the public courtyard through a small private loggia. The configuration of the landscaped courtyards offers augmented stormwater retention. The widest, northern courtyard terraces up to a broad river-facing public deck. Along with river viewing, the deck offers access to a play area, community center, and the architecture-school space.

Eight-story towers, in which two units per floor hang from the core, open to the river. A slitlike recess in each brings breezes into the rearmost rooms and allows glass on three sides of each living room.

The straightforward, modular plans are intended to aid in use of prefabrication, for speed of erection. River water would be sourced for a radiant cooling system involving a mat of tubes embedded in the unit ceilings.

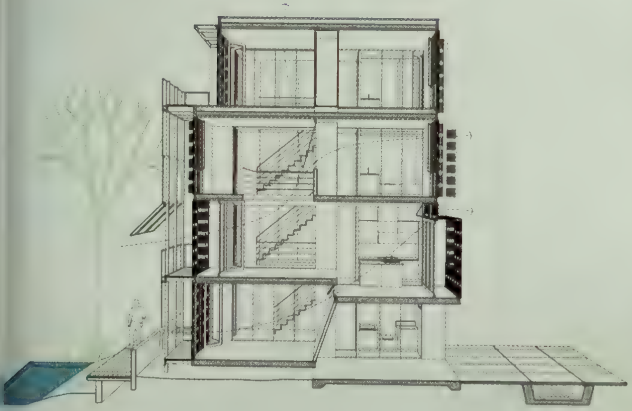
"The courtyards are a very good idea," commented Naslund, "wrapped by housing, yet opening to the street and the community. Similar bungalow courtyard complexes are much beloved in California." *J.S.R.*





> "THE BELIEVABILITY OF THE TOWER LAYOUT IS EXCITING."
> —GOODEN

Generous courtyards open from Chartres Street (top and section), lined by town houses (below left and interior, right). They lead to the river.



CITATION

workshop/apd

New York City
Andrew Kotchen, Matthew Berman with Stephan Thimme, Andrew Hart, Zachary Helmers, Matthew Miller, Steven Thrasher

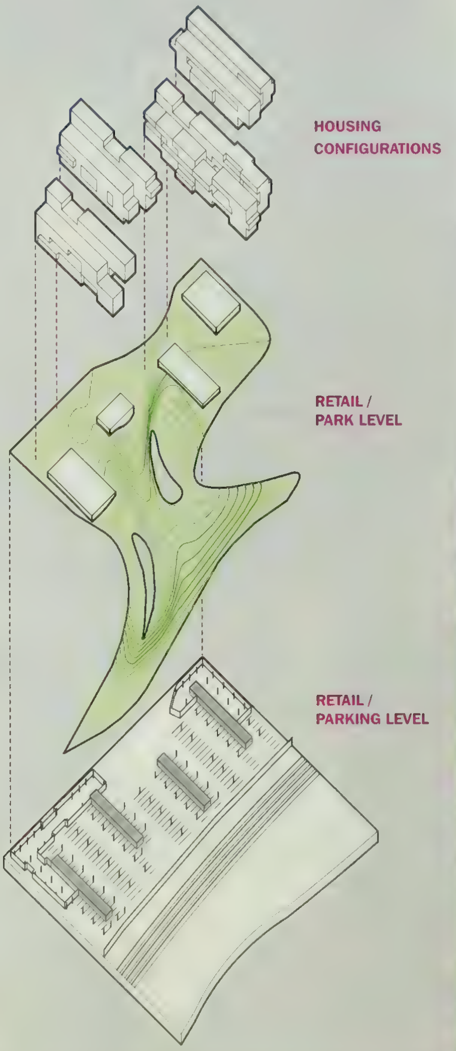
Title: Mod Set: From Transience to Permanence

Concept: A topographic roof structure warps up from Chartres Street to make a continuous storefront and access to the parking, retail, and institutional space it covers. Planted, it becomes a public park to serve the neighborhood and a landscaped setting for four double-loaded slab structures containing apartments. The landscape spans the railroad right-of-way and the levee, folding down to augment a planned riverside promenade.

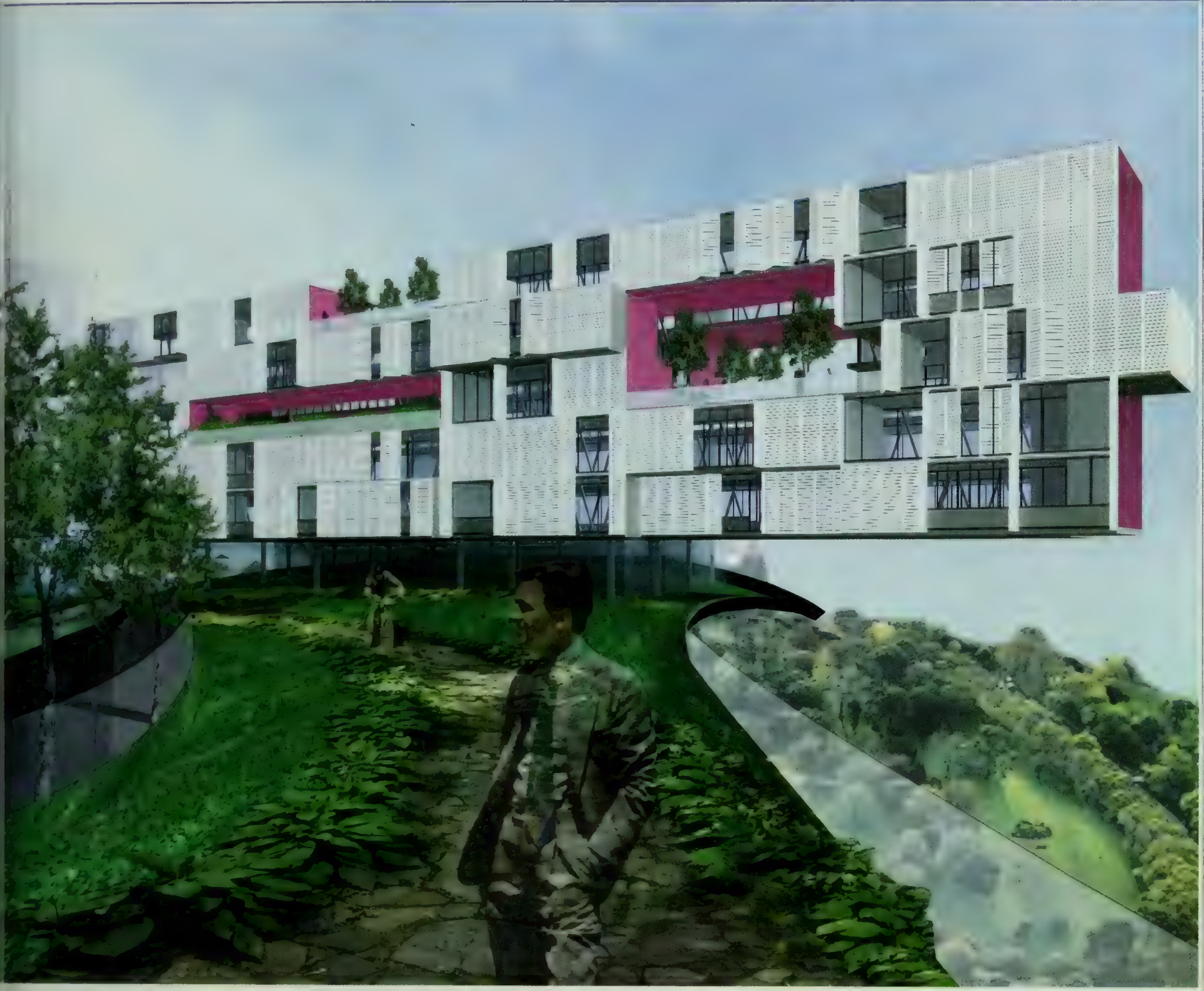
The angle of the residential buildings minimizes heat gain. Workshop/apd plans prefabricated, modular construction to economically build units that step in and out around a central circulation "chimney" that aids natural ventilation and offers sun-dappled views to the river from inside rooms.

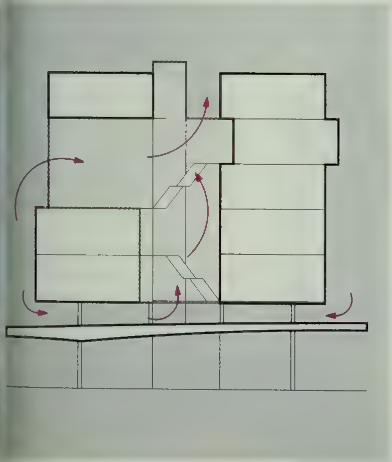
Louvered panels shade windows or swing out to catch breezes. Heavy slabs suspended from the ceiling use radiant cooling, drawing off condensation for use as "gray water" irrigation.

"This is a very aggressive take on the river," commented Naslund. "but it did certain things better." Carrying the landscape over the flood wall "reconnects the river with the city," said Dumez. "You feel that the housing units are embedded in the communal spaces, even when they are elevated." *J.S.R.*

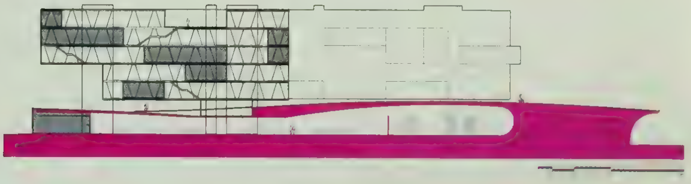


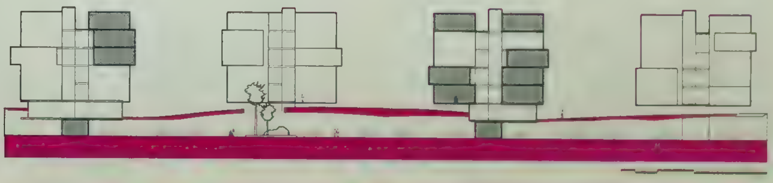
> "THIS PROJECT MAKES ROOM FOR THESE UNITS TO BREATHE."
> — *WILSON*





A warped, parklike topography blankets the levee (right and opposite, top left), topped by slab buildings (above), with chimneys and openings for ventilation and views (left and opposite, bottom).





New Orleans Prototype House Competition

As New Orleans faces a future in which widespread abandonment is a real possibility, this competition, open only to current architecture students, sought designs for a three-bedroom house that responds to the city's new circumstances: one that's easy to install on an infill site, that rises above flood waters, and that respects the local climate and environment. Since historic house types in New Orleans have proved to be highly adaptable over time, juror Patty Gay observed, "It's tough to compete with shotguns or Creole cottages" in the design of a new prototype. That said, the five Honor Award projects on these pages, submitted by students from Bozeman, Montana, to Cambridge, Massachusetts, did an admirable job. The jury felt five additional projects deserved a citation (below right). "Lots of entries were interesting in the way they were built," commented Brian MacKay-Lyons. "This is surprising because students don't necessarily know much about construction." *J.S.R.*

> THERE'S "LATENT OPTIMISM" IN THE SCHEME. "IMPLICITLY, IT HOPES FOR A POSITIVE WAY TO LOOK AT WHAT WE FEAR."
> *—MACKAY-LYONS*

Robert Ivy sought entries "that were thought through for modern life."

Bryan MacKay-Lyons focused on entries that expressed "a succinctness and fitness for the budget."

> "IT SPEAKS TO THE IMPACT OF THE FLOOD. IT BEGINS TO EXPRESS HOW PEOPLE DEAL WITH WHAT TOOK PLACE."
> *—TRAHAN*

The Jurors

Brian MacKay-Lyons, FAIA
A principal at MacKay-Lyons Sweetapple Architects of Halifax, Nova Scotia, he directs Ghost Lab, a summer design-build internship program.

Patty Gay
Involved in New Orleans's Preservation Resource Center since its 1974 founding, Gay is now its executive director, a voice on behalf of the city's 38,000 historic structures.

Robert Ivy, FAIA
A Tulane graduate, Ivy is RECORD's editor in chief and vice president and editorial director of the McGraw-Hill Companies' construction publications.

Trey Trahan, FAIA
Principal of Trahan Architects, Baton Rouge, he has won three national design awards in recent years and is leading the renovation of the hurricane-damaged Louisiana Superdome.

CITATIONS

- **Carlos Lopez,** Lawrence Technological University, Southfield, Mich.; Edward Orlowski, instructor
- **Dallas Huard,** Montana State University, Bozeman; Ferd Johns, instru
- **Tyler Call,** Montana State University, Bozeman; Ferd Johns, instructor
- **Lincoln Lewis, Jared Bert Dani May,** University of Kansas, Lawrence; Paola Sanguinetti, instruct
- **Brady Mark and Matt Friesleben,** Universi of Kansas, Lawrence; Paola Sanguinetti, instruct

HONOR AWARD

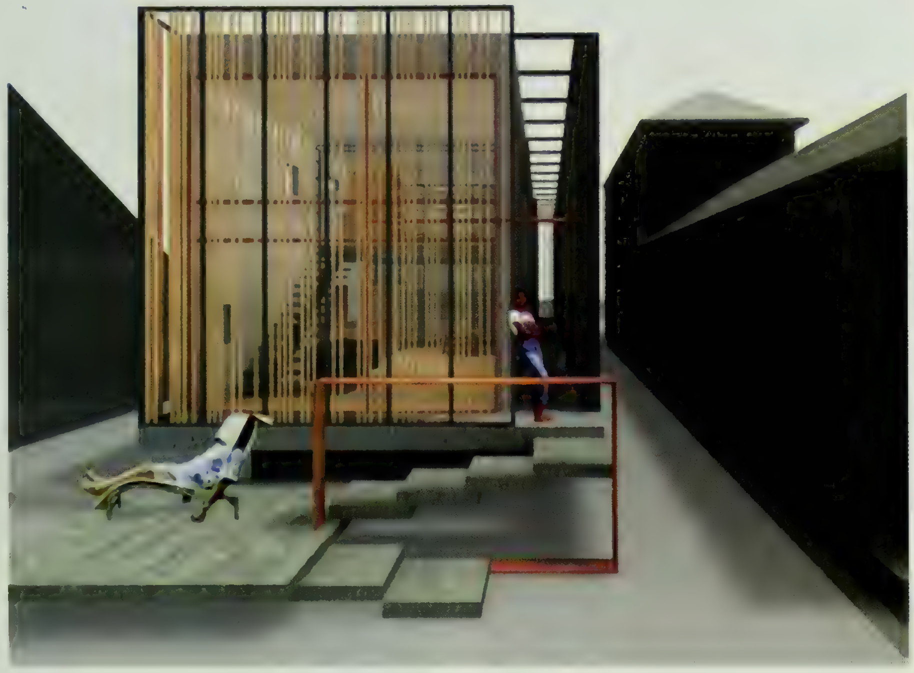
Michelle Jellison
Montana State University, Bozeman
John Brittingham, instructor

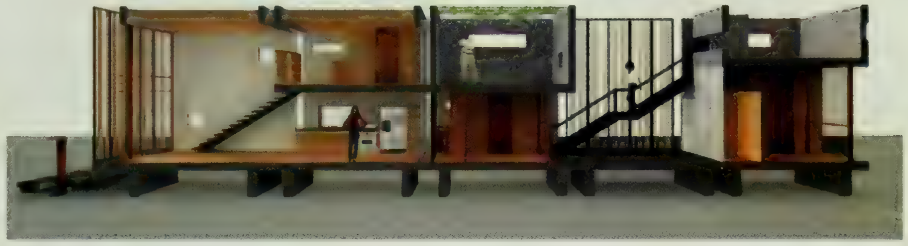
Concept: In her modular scheme, Michelle Jellison updates aspects of two traditional New Orleans types. It has the linear, single-loaded layout of the shotgun, but it includes a much more generous inner courtyard than is usually found in the type. She has also placed a second floor on the front, rather than at the rear, which is conventional for "camelback" types. This allows her to provide a high-ceilinged living/dining area, and exposes an upper-level loft to a wall of daylight from the street.

The modular nature of the construction offers many possible variations on the layout, however. Its height off the ground can be adjusted according to flood risk. Also, it can start small and accept additions as a family and its resources grows.

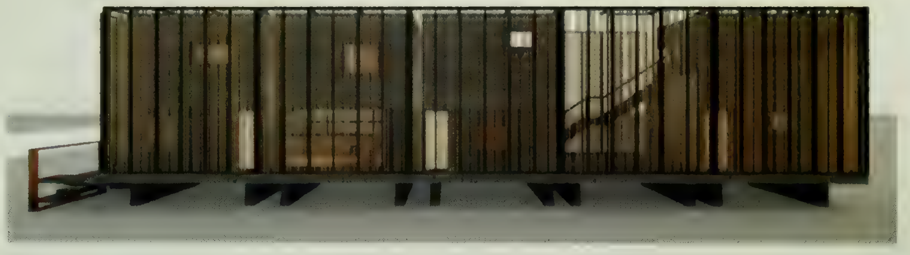
Glass walls on the street and the corridor side of the house provide ample natural light. Wood louvered panels mounted outside the glass can be adjusted to calibrate levels of shade, ventilation, and privacy.

According to juror Brian MacKay-Lyons, "This project came closest to solving the problem. The modular elements elegantly express how it is built. It resonates with traditional types." Trey Trahan admired the inventive but simple layering of the walls to both let in ample light and filter it. *J.S.R.*

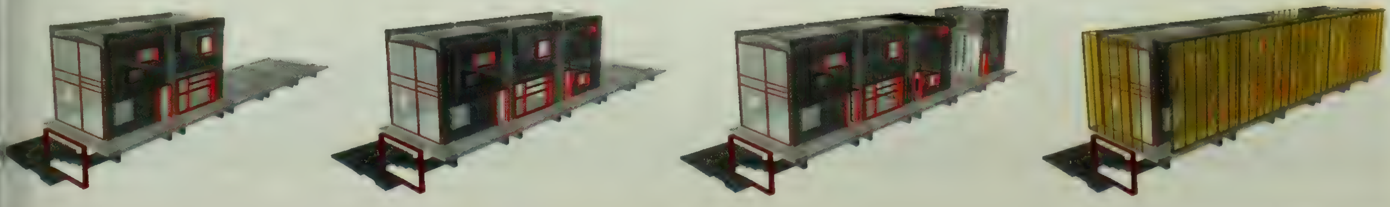




"MODEST AND APPROPRIATELY SCALED."
—*MACKAY-LYONS*



Modules are added as space is needed (below). Louvered panels screen glass.



HONOR AWARD

Amin Gilani and Josh Spoerl
University of Texas, Arlington
Heath McDonald and Bijan Youssefzadeh, instructors

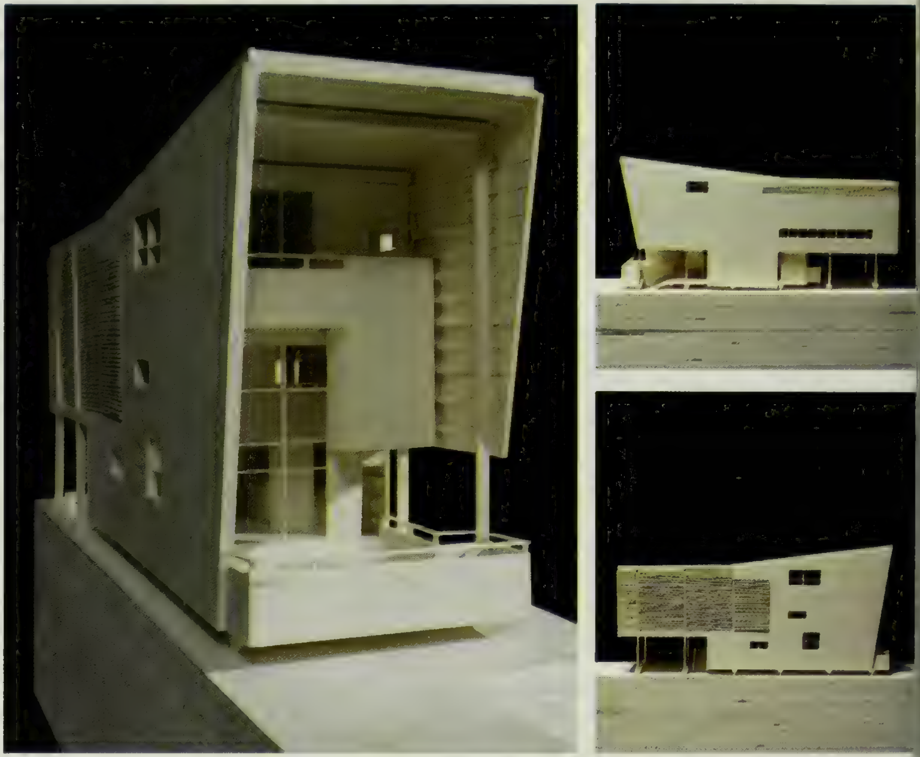
Title: The Porch House

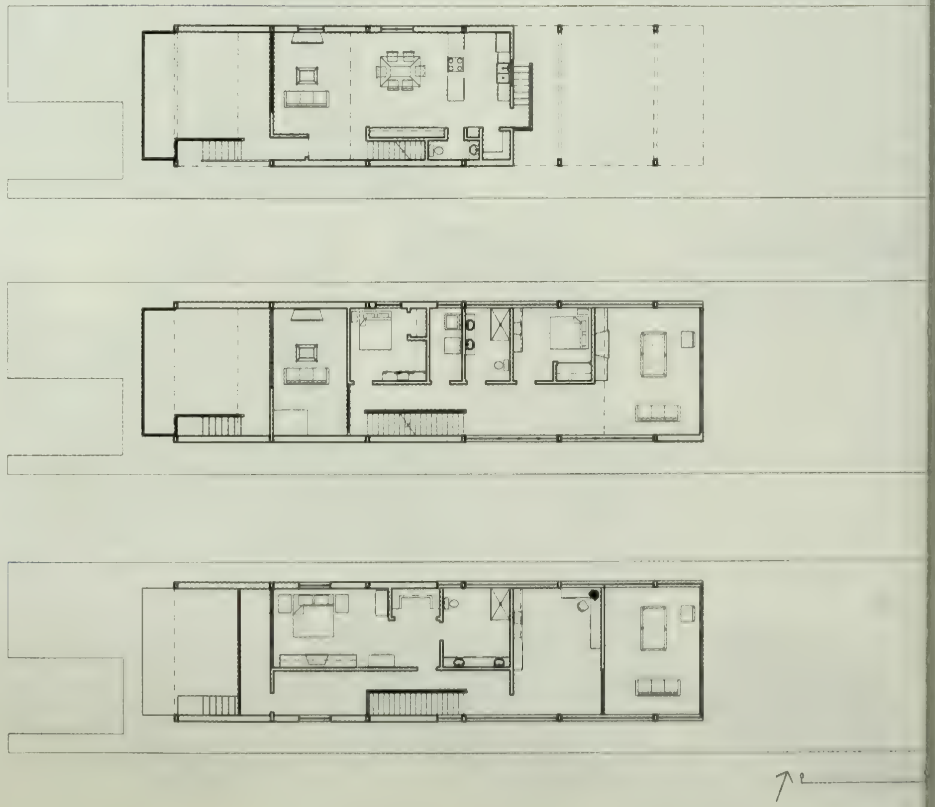
Concept: Metal frames at modular intervals support a panel system that extends beyond the building volume at the street-facing side to shade porches at the main level and the top level. At the rear, the panels become glass, protected by louvers, to offer light with privacy to sleeping areas.

With a straight run of circulation on the south, the plan resembles a shotgun house type. It is much more richly developed spatially, however. On the ground floor, living, dining, and kitchen areas open to an outdoor space covered by an extension of the second floor. That floor sets back to make a double-height space over the living room and to permit an internal bedroom to receive daylight from the street. The third floor sets back at the rear to create a high master bedroom.

In choosing winners, the jury found itself focusing on the degree to which designs enlivened the street. Mackay-Lyons was concerned that "this entry could be regarded as a custom solution rather than a prototypical one, but I fell in love with the formal skill. Execution does matter." Trahan appreciated "the front porch that uses different levels and an urban facade that is open, yet partly enclosed; punched, yet filtered. It would be interesting to investigate how this one and [Jellison] work in daytime versus nighttime." *J.S.R.*

> "THIS IS ACTIVATING, LIVELY, RICH."
> — *TRAHAN*





Double-height spaces front and back (plans) are expressed in the dramatically hooded front porch (top left).

HONOR AWARD

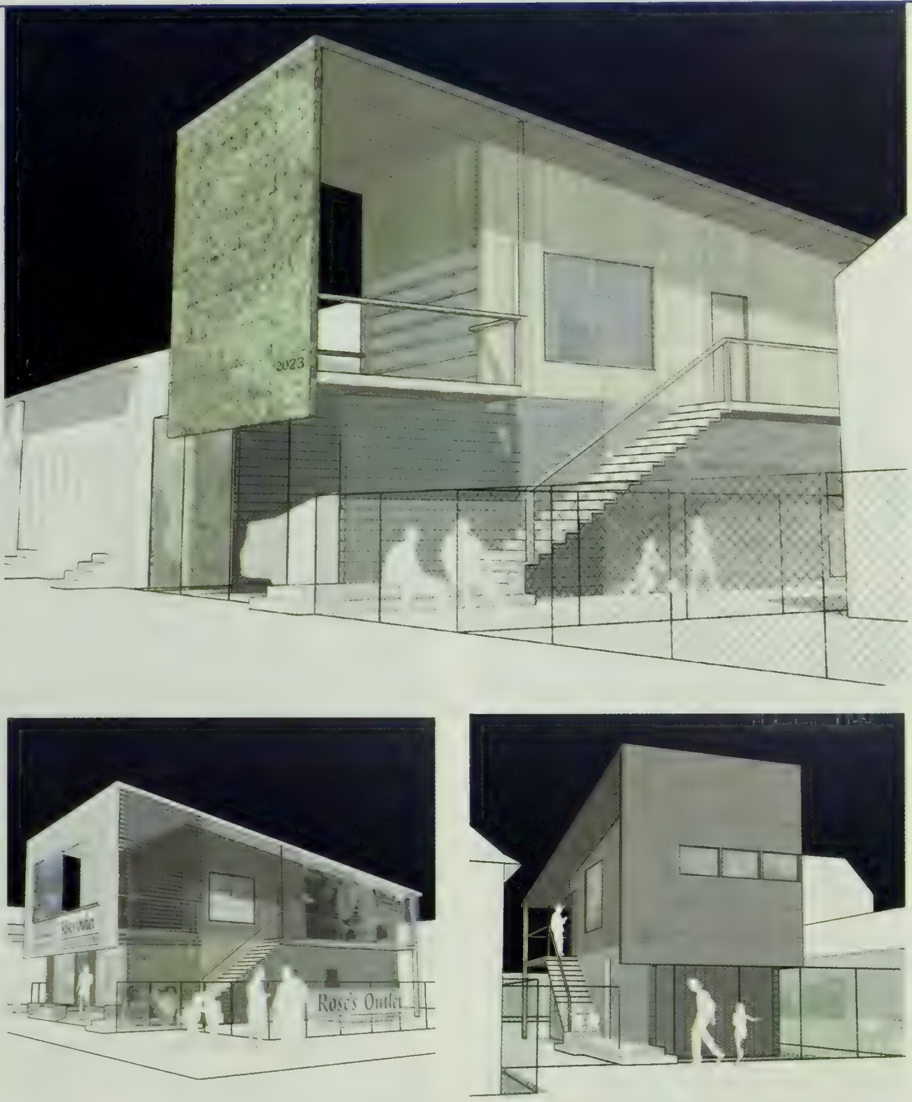
Zui Lig Ng
University of Houston; Rafael Longoria and Fernando Brave, instructors

Title: Shotgun Chameleon

Concept: Aptly titled, this simple shed-roofed volume adapts to circumstances in several ways. The street-facing ground floor room can be used as a garage or for a home-based business, depending on the neighborhood and codes. Closing off the internal stair (plans) would permit the ground floor to be rented out as a separate living unit or used for less essential functions akin to "basement house" types that are used in especially flood-prone areas of New Orleans.

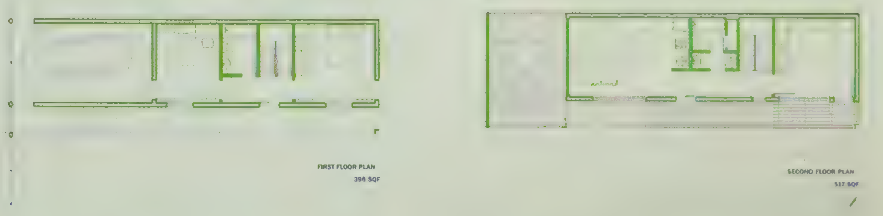
The scrimlike surface that folds down from the roof on the street side can reflect varying uses. Twined with vines, it can become a literally green shade. It can support louver panels for ventilation and privacy, or even accept signage or advertising for the ground-floor business. A glazed, garage-type door extends the living area onto the porch.

For flood resistance, the ground floor would be framed in concrete block, while the upper level would be clad in structural insulated panels. Since chain-link fencing is ubiquitous in New Orleans neighborhoods, Ng proposes to use it too, but hopes it can "become a blank canvas, where individuality can be expressed through planting or decorations." Juror Patty Gay complimented the way the entry "used the front porch to be sociable, to see what's going on, to be able to talk to neighbors." *J.S.R.*



The porch screen can support greenery (top), advertising (above left), or it can shade and ventilate (above right).

"I ADMIRE THE VERSATILE PORCH SCREEN."
— *TRAHAN*



HONOR AWARD

Mark D. Stankey and
John A. Kucharski
Montana State University, Bozeman;
John Brittingham, instructor

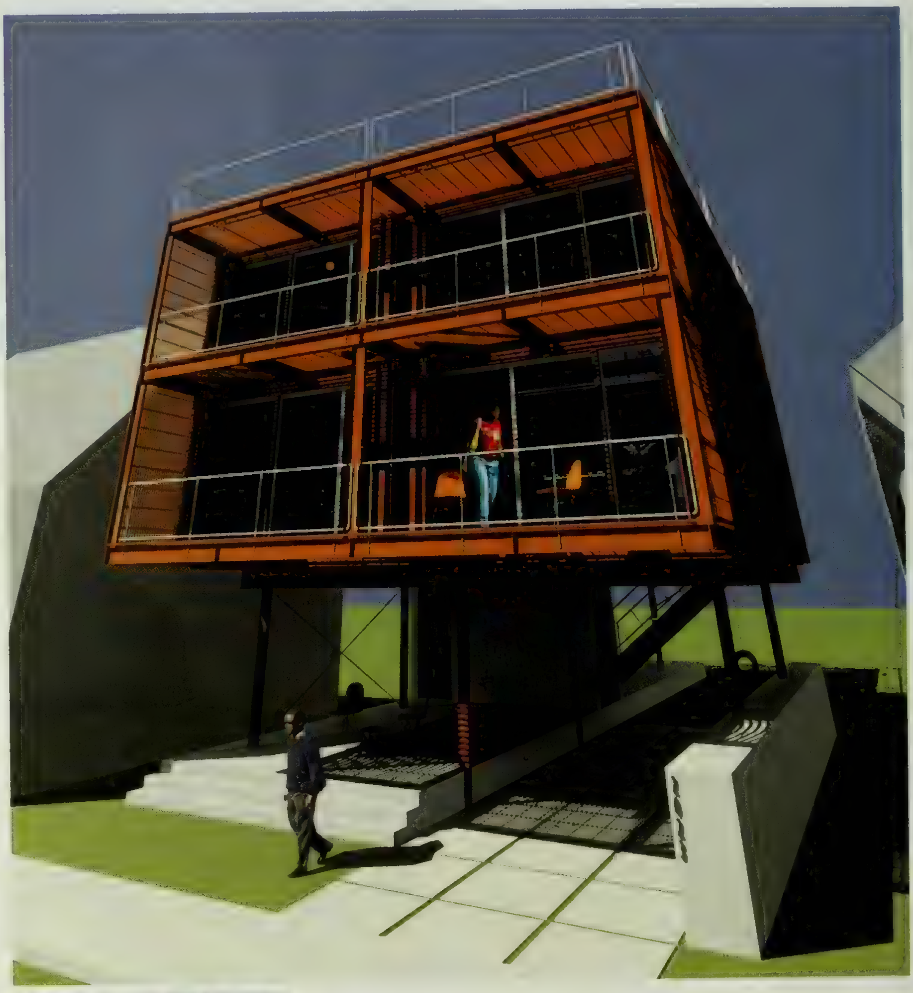
Concept: The team devised a plan based on a 25-foot-by-15-foot module to take advantage of prefabrication. The modules stand above potential floodwaters on steel columns and plug into a central, concrete-framed core containing mechanical systems.

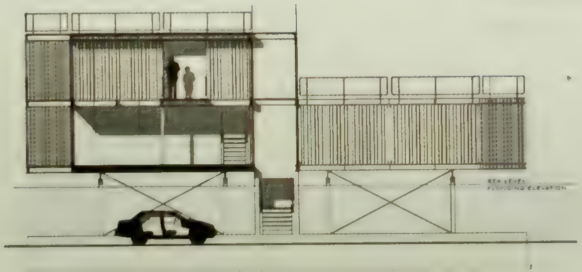
The L-shaped plan has the kitchen, dining, and living areas running parallel to the street. Spaces on the street side open to balconies faced on the top, bottom, and sides in steel grating to filter light, which Stankey and Kucharski see as an updated version of French Quarter "balcony architecture." Steel shutters pull down for both privacy and protection against hurricane winds.

This configuration, by placing most of the living space near the street, leaves a larger rear yard than the long, narrow shotgun plans typical of the city. The modular planning would permit other configurations, according to the entrants.

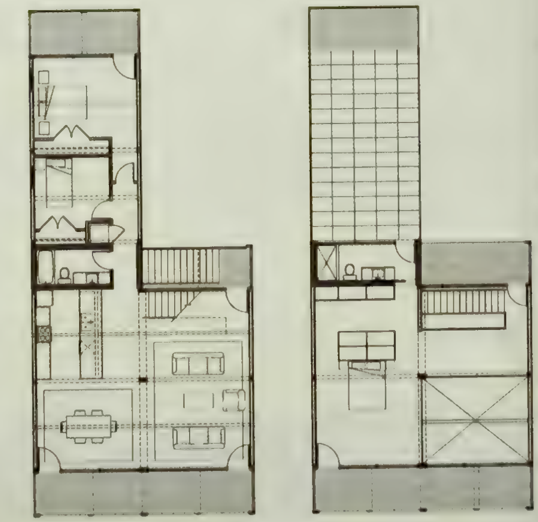
They also propose different assemblies depending on whether cost was the driving factor or more robust construction. While the "economic" exterior relies on wood studs, cement-composite siding, and glass-fiber batt insulation, the "enhanced" version anticipates steel studs, metal siding, and sprayed polystyrene insulation. Trahan admired the way the project engaged the system by which it would be built. *J.S.R.*

> "THIS DESIGN WAS REALISTIC IN THE WAY IT CONSIDERED MATERIALS."
> —*GAY*





Primary spaces line the street above an open ground floor (top). Modules, made off-site, would be craned into place (above).

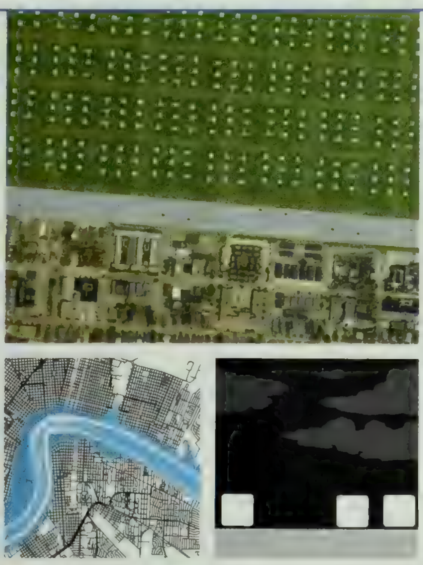


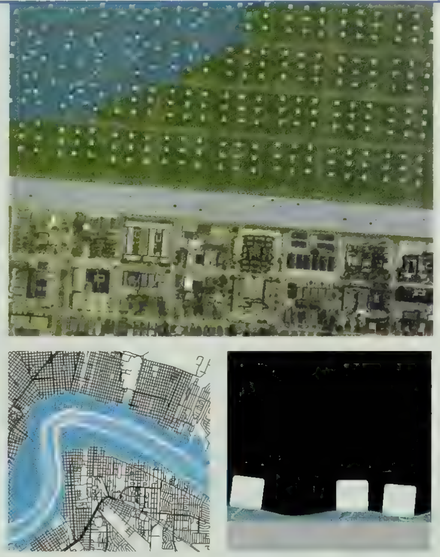
HONOR AWARD

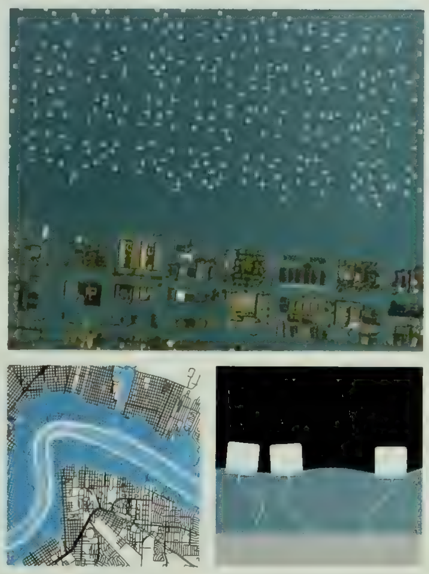
Kiduck Kim and Christian Stayner
Harvard University, Cambridge, Mass.

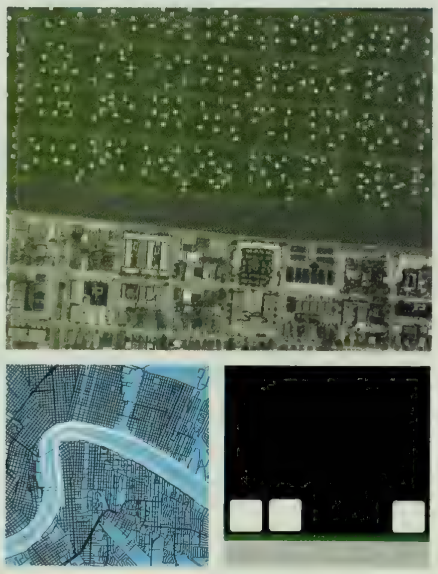
Concept: Citing "a losing battle between elevation and economics," Stayner and Kim propose to "welcome the river in" rather than treat it as "an unwanted guest." (They are Harvard students but entered on their own.) When floodwaters threaten, residents could take refuge in truckable, two-level emergency modules pontooned to float up with rising waters. While solar-powered poles would delineate submerged streets and property lines, the modules would be permitted to drift, tethered to utilities through unfurling umbilicals. As the water level recedes, the modules would settle in a new pattern "and a post-diluvial landscape would emerge," blurring, they hope, old economic stratifications. (The sequence is portrayed in the four images at right, from upper left—as floodwaters begin—to lower right, when they have receded.)

"This says we're still dealing with the terror of the tragedy," commented juror Gay. "It speaks to the impact of the flood," added Trahan. "The images convey what it felt like. It begins to express how people deal with what took place. When you consider the idea of waters penetrating the city and redistributing it, it makes you ask who are we and how do we come back." There's a "latent optimism," in the scheme, said MacKay-Lyons. "Implicitly, it hopes for a positive way to look at what we fear." For Gay, "It's a lest-we-forget statement." *J.S.R.*

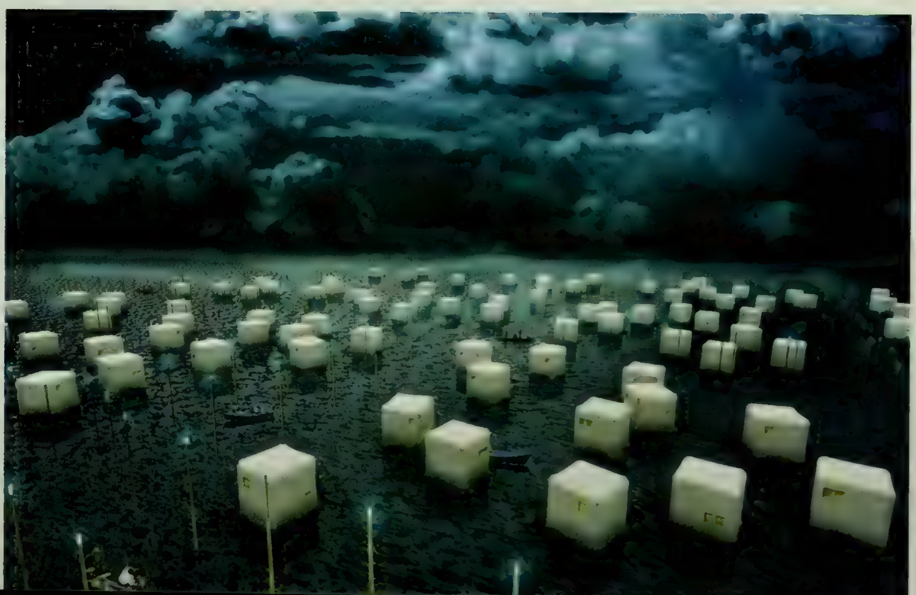




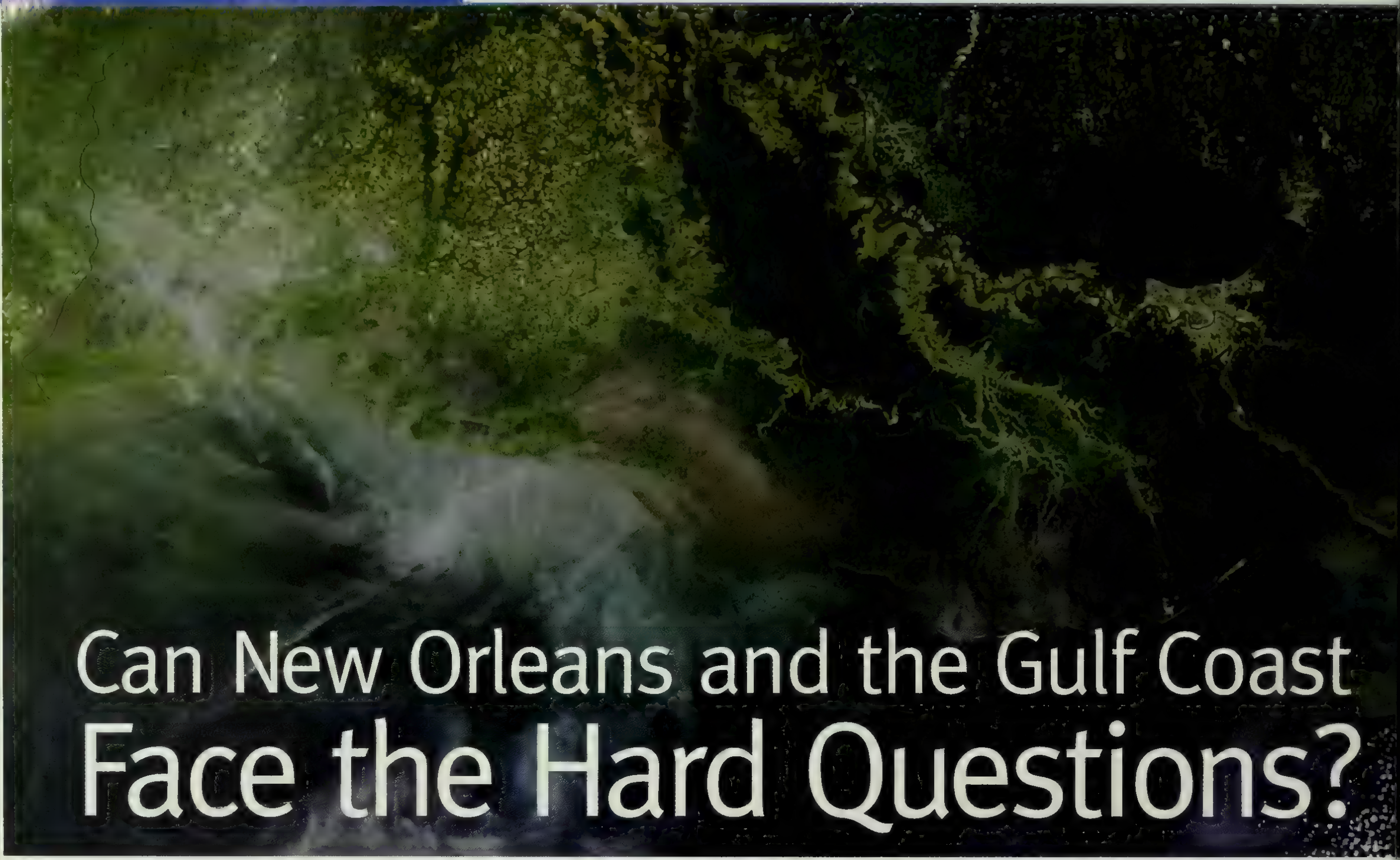




"THIS, WHICH SEEMS
OUTRAGEOUS NOW,
MAY TURN OUT
NOT TO BE."
—*MACKAY- LYONS*



Emergency modules—like marshmallow lifeboats—keep residents safe during what the entrants regard as inevitable floods.



Can New Orleans and the Gulf Coast Face the Hard Questions?

By James S. Russell, AIA

In the chaotic weeks that followed the devastation of Hurricane Katrina, volunteers from all over the country kept stopping Bill Stallworth on the streets of Biloxi, Mississippi, and asking him if he needed help. Stallworth, a city councilman, was amazed that volunteers would show up without knowing where to go or how to pitch in. "There's got to be a better way to channel this," he thought. He had met Sherry-Lea Bloodworth when both assisted hundreds to evacuate the city before the storm. With her two young children safely at her parent's home an hour and a half away in Mobile, Alabama, Bloodworth was hired by Architecture for Humanity to become its Gulf Coast coordinator. With a grant, some donated air-conditioning units, and some of the wandering volunteers, she and Stallworth set up the East Biloxi Coordination and Relief Center in a flooded AME church.

With Stallworth's knowledge of the community, Bloodworth and a horde of volunteers in short order divided the blasted blocks of East Biloxi into a grid, so that the center could systematically organize and deploy teams from what became dozens of organizations from all over America. The Hurricane Relief Corps worked with Buddhist, Latter-Day Saint, and Islamic Relief groups. Their first task was to help homeowners assess damage. Aid groups assisted homeowners of modest means—many of them residents for generations, drawn to harvest the Gulf's seafood bounty—in removing ruined possessions, ripping out damaged finishes to dry the ubiquitous mold, and preparing homes for restoration.

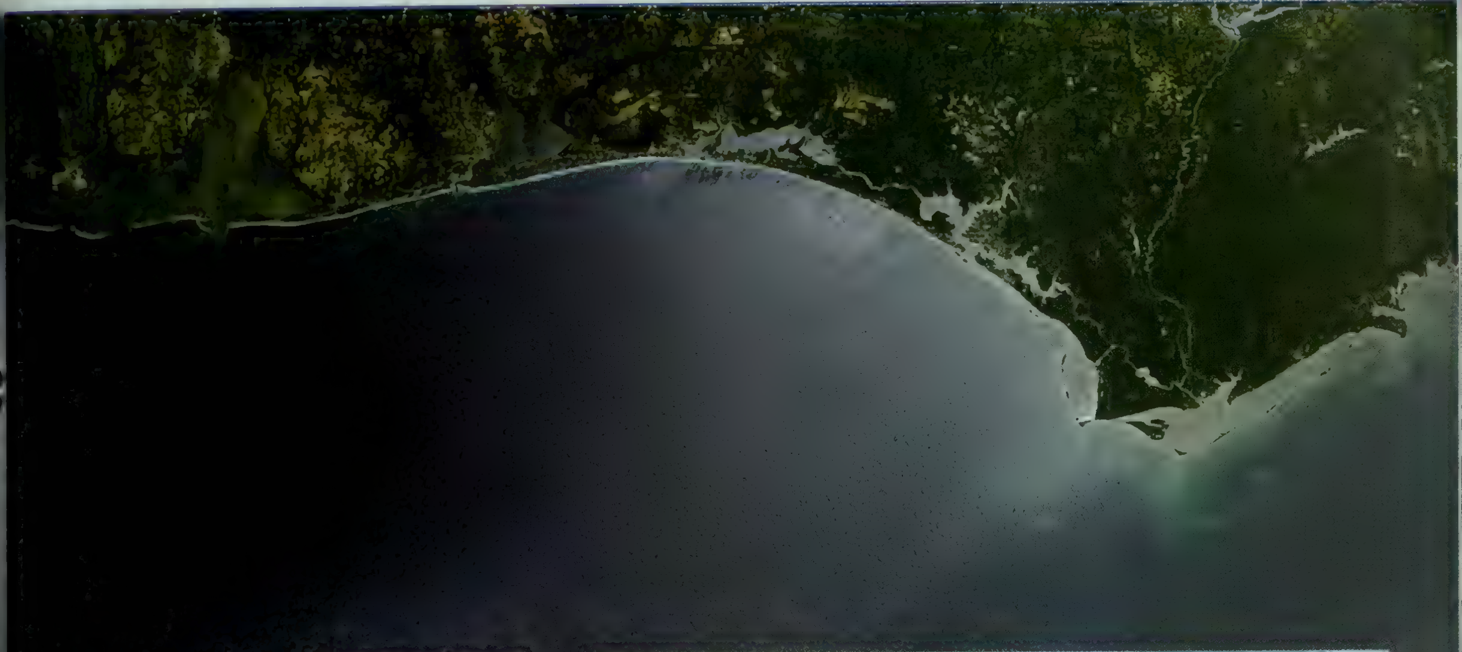
By January, the center had coordinated the cleanup of 1,000 homes and was able to send volunteers to help those of limited means rebuild. Many could not afford adequate insurance or were not eligible for flood insurance.

On a reporter's visit to one modest bungalow, Marshall Johnson, a barber and waiter, was keeping close tabs on a group of volunteers from Michigan who were applying new drywall to studs scrubbed of mold. Johnson expected to be back in his house only about 13 weeks after volunteers began.

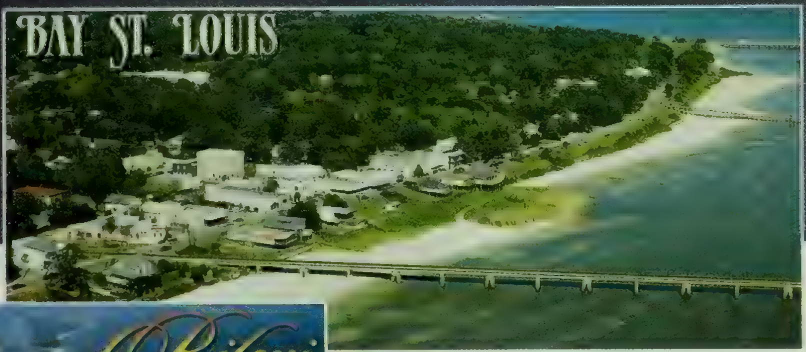
The East Biloxi Coordination Center demonstrates just how much well-organized volunteers can accomplish. Regrettably, the planning process for New Orleans and most of the Gulf Coast is not readily transcending such ad hoc efforts.

Biloxi: cottages, condos, or casinos?

Infused with ready cash and battalions of imported workers, three of 11 heavily damaged Biloxi casinos quickly reopened after the storm. They swarm with gamblers cocooned from the landscape of devastation in hastily constructed beige-painted halls jammed with slot machines. With visions of a rebuilding bonanza, officials rapidly approved expansive gambling growth, which may lead to 20 new facilities. (Before the storm, the state had limited the number of casinos by confining them to a few sites along the city's oceanfront and mandating floating gaming barges in spite of their known vulnerability to storms. The barges that did not sink in the storm tore loose from their moorings, battering adjacent blocks to smithereens.) A charrette conducted last October by the Congress for the New Urbanism (CNU) proposed infilling the flattened blocks of East Biloxi with cottages at



Communities of the Gulf South (above) aspire to retain their low-rise character (postcards), but may instead see a wall of Florida-style condos.



much the same scale that existed. But the casino land rush has targeted the same streets. Modest plots worth perhaps $50,000 began selling for five times that.

At the time of the charrette, some thought that casinos and high-rise condominiums could encircle the peninsula on which Biloxi sits, creating a storm-surge-resistant fortress. While naive at best, the perception of casinos and condos as hurricane bastions persists, even though rains as well as floodwaters made most of the city's existing high-rises uninhabitable.

Many long-time residents realize that a city walled off from the sea by towers sitting on parking ramps isn't much of a city. They remember a low-rise community of porched homes and modest motels facing the gulf through the entwined branches of ancient live oaks. On the other hand, observes David Hardy, AIA, of Biloxi-based Guild Hardy Architects, "When Harrah's casino wants to do a billion dollar project, that's hard to ignore." The official acquiescence to a future that may bring a Florida-style wall of high-rises caused Moule & Polyzoides, who had led planning after the CNU charrette, to resign. In too much of Biloxi, Elizabeth Moule, explained, "instead of building to the 20-foot height of a cottage, you are now allowed to build upwards of 20, 25, or 30 stories." She fears the upzoning will lead to "a disjunctive mess," that won't bring as much development as anticipated. "You've dislodged all the citizens who need to get back to their houses," she explained, "while speculators sit on land waiting for what they think will be full market value. So you'll see a tower here, a cottage there, and six parking lots."

Distrust stalls New Orleans planning

In New Orleans, the blocks of intact-looking but empty houses seemed to stretch endlessly in the months after Katrina, as uncertainty about the prospects for rebuilding dragged on. Even as residents began gamely throwing out mold-encrusted furniture and carpets, the streets, lacking electricity, fell into a darkness only occasionally dispelled by headlights. By late March, however, many neighborhoods bustled with cleanup activity, the narrow yards jammed with FEMA trailers propped on wobbly piles of concrete blocks. Indeed, spring estimates of New Orleans's permanent population exceeded levels not expected until September.

As recovery quickened block by block, the city's official planning process, undertaken by the Bring New Orleans Back Commission (BNOBC), floundered under a national spotlight. Its urban-planning committee, led by Philadelphia-based Wallace Roberts & Todd (WRT), in January proposed a moratorium on building in the hardest-hit neighborhoods until some clearer picture developed of how many people would come back. Enraged residents, exhausted by government failures and broken promises, declared the moratorium a death knell to their neighborhoods, and Mayor C. Ray Nagin rapidly abandoned the idea. "The word 'moratorium' was an unfortunate use of nomenclature," explained William Raymond Manning, a local architect who cochaired the urban planning committee. "It was not intended to prevent anything from happening. It was a period to do some planning and data gathering, so that people could be advised on the most prudent way to proceed. We need to create scenarios about what growth might be like, and what we can depend on in terms of the strengths and weaknesses in our city."

The BNOBC plan, however, inherited anger from an earlier Urban Land Institute recommendation that the city shrink its physical footprint so that it could efficiently serve—and levees could protect—what is predicted to be a far smaller population. Allen Eskew, AIA, of locally based architect Eskew + Dumez + Ripple, described the dilemma: "Prestorm, the city held 480,000 people, which was down from a 630,000 peak footprint in the late 1960s. With the RAND Corporation projecting a stable population of only 250,000, this is a huge infrastructure to maintain in a city with limited resources for a such a diminished population."

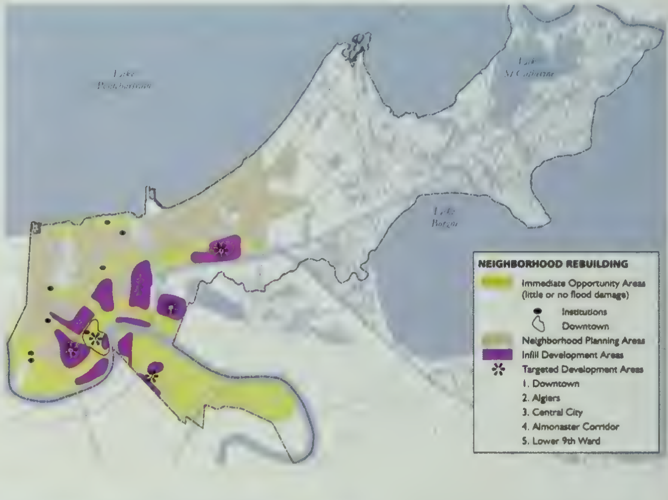
Though Eskew's formulation was a rational one, it was foreign to a city where people had gotten used to making their own way, and where neighbors had long depended on each other. You were expected to call out to your neighbor, asking if she needed anything when you went to the corner store. If you didn't wave hello as you passed by people beating the heat on the city's ubiquitous porches, you were considered to be "walking over them." On one desolate street, a woman had taken up her customary perch on her porch in spite of the fact that there were no passersby to greet and no neighbors to talk to. Under such circumstances, the fierce desire of residents to return to exactly their own street and to exactly their own house—one that their family may have owned for generations—was not surprising.

"Look and leave"—for good?

As it happened, many people who wanted to come back were forced to wait anyway. A gap housing-finance plan for Louisiana failed in Congress, while a similar program moved ahead in Mississippi. Efforts to deliver permanent housing short-term (focusing on the substantial stock of housing that could be readily and quickly renovated, and getting little-damaged public housing back on line) fell victim, at least temporarily, to Congressional budget battles.

As late as the end of April significant parts of New Orleans still lacked fully functioning utilities (and hookup backlogs stretched for weeks). No one in government sped the restoration of electricity by pressuring power-supplier Entergy's parent company to underwrite its bankrupt New Orleans subsidiary, or made sure the job got done some other way.

AS LATE AS APRIL, MANY PARTS OF NEW ORLEANS STILL LACKED FULLY FUNCTIONING UTILITIES.



Cleanups (left) fed optimism, but residents feared that areas tinted beige in the BNOBC plan (above) would see no rebuilding, in spite of assurances.

Unserved areas remained officially designated "look and leave," which stalled serious rebuilding and further delayed the return of even those who could face the gruesome cleanup tasks. (Many residents looked and walked away from those lost possessions, leaving behind the X-crossed-circle ideogram spray-painted by searchers in the days after the storm, a few grimly recording the discovery of a body.)

In Holy Cross and New Orleans East, where water faucets only dripped and downed power lines still draped backyards, an eerie quiet remained like a smothering blanket, in contrast to the constant tattoo of hammers heard in most of the city. For literally powerless residents, the lack of services had the same enervating effect as the moratorium they'd fought so hard against.

As on the Gulf, volunteers and individuals streamed into the debris-filled streets while officials squabbled. Volunteers helped the Preservation Resource Center resurvey more than 500 historic properties at risk for demolition. The center persuaded the city that more than half of those slated for bulldozing could be saved. Acorn, a community organization serving low- and moderate-income families, surveyed, cleaned, and gutted more than 1,000 houses. But no clearinghouse or coordinating agency for the wave of volunteers has developed in New Orleans along the lines of the East Biloxi Coordination Center. Three dozen schools of architecture headed to New Orleans in winter and spring, both to expose their students to a first-hand understanding of the disaster, and in many cases,

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to lend willing backs for cleaning up. At spring break, they were joined by additional thousands of students from all over the country.

As it happened, circumstances made the long-delayed release of the flood advisories late in April almost a nonevent. First of all, FEMA required raising damaged houses only at most three feet or so—much less than many experts anticipated. Secondly, all the volunteer rehabbing created a consensus that even severely flooded, mold-encrusted homes could be restored for far less money than had been estimated immediately after the storm. Perhaps only 3,000 homes out of the 122,000 damaged in New Orleans would have to be torn down. According to Kevin Mercadel, the New Orleans program officer for the National Trust for Historic Preservation, "From a purely structural point of view, a cogent argument can be made that the overwhelming majority of damaged homes are less than 50 percent damaged."

What this means is that relatively few homes would have to be raised to the new flood elevations. The good news is that many more homeowners can afford to rebuild in the short term. The bad news is that a high percentage of the housing stock may prove just as vulnerable as it was pre-Katrina.

Despite 30-foot wave damage (above), coast residents resisted razing houses. Rebuilding started slowly in Arabi (left). A gutted New Orleans shotgun awaited renovation (below).

PHOTOGRAPHY: © MICHAEL GOODMAN (TOP); JAMES S. RUSSELL (CENTER AND RIGHT)

"Freelance visioning"

FEMA withdrew promised funding for the BNOBC planning effort, so the second phase, intended to involve every neighborhood, stopped. The city council went its own way, authorizing some neighborhoods to start planning on their own. Other neighborhoods with resources brought in their own consultants. But such "freelance visioning," as one local participant called it, left behind "neighborhoods that don't have access to resources or organizations," as Beckman explained. Finally, state and federal agencies commanded the city to unite behind one planning process, and the Rockefeller Fund, a private foundation, helped bridge the funding gap, spurring a reunited effort that began in May.

The neighborhood process, Beckman explained, could address some significant unmet needs, such as "a lack of parks and local convenience stores. People can think about where the center of the neighborhood could be, and deal with trouble spots and abandoned buildings." Ultimately, those plans will have to come to terms with what is possible in a city that's lost many of its important businesses, where most of its hospitals are out of service, and its school system is in shambles. That will mean returning to the politically explosive question of how to physically consolidate a city where many streets may still end up with just a couple of houses occupied. Dealing with shrunken neighborhoods is not only racially charged, but may entail the government taking of private property that in many cases has been a family's only source of wealth for generations.

> "PLANNING IN NEW ORLEANS MUST ONE DAY RETURN TO A DEBATE ON CONSOLIDATING A SMALLER CITY."
> —*DAVID PERKES*

Through a concerted and persistent promotional effort (as well as some success in disaster-preparedness planning after Florida's Hurricane Andrew), architects and planners with a New Urbanist bent have brought the SmartCode (that controls architectural form) and the Transect (that recreates traditional gradations of density from city center to rural edge) to towns in Mississippi that have never before regarded planning as particularly useful. Similarly, in Louisiana, the governor hired Duany-Plater Zyberk (to conduct local design charrettes), Pittsburgh-based Urban Design Associates (to develop a New Urbanist-style "toolkit" for residential and commercial architecture), and Calthorpe Associates to create a long-term regional vision. But few questions seemed to have been asked about how such "neighborhood-based" planning techniques could be scaled up to meet the challenges of an environmental disaster that touched four states, a dozen counties, and turned the lives of millions upside down.

Bridging the vision gap

In the short term, though, the charrettes dramatically changed the terms of the rebuilding discussion. To Biloxi architect Hardy's amazement, "*charrette* is now a household word on the Gulf Coast." He

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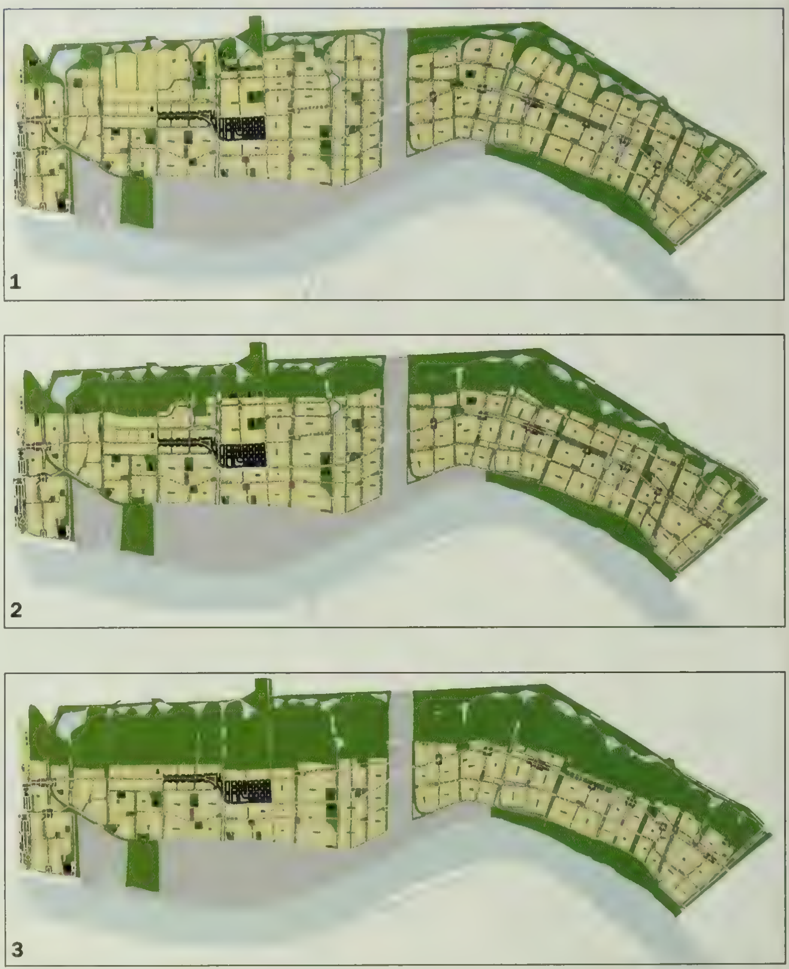
was referring to the workshops in which he participated, undertaken by the Congress for the New Urbanism in 11 Mississippi towns only six weeks after the hurricane. "The community at large now recognizes the value of what architects do and the importance of good design." Added Ricky Matthews, publisher of the Gulfport *Sun-Herald* (which just won a Pulitzer Prize for its Katrina coverage), "The real value of what the they did was to develop a sense of hope in these communities." David Perkes, AIA, who has been doing follow-up planning as director of the Gulf Coast Community Design Studio formed out of Mississippi State University, noted further, "The charrettes got a lot of people in motion, if for no other reason than that they did not want to get left out."

As months have passed, however, even enthusiasts have a hard time imagining those sketches turning into reality. "The houses they were drawing would be in the $100,000 to $200,000 range," said Councilman Stallworth. "If that's the model, all bets are off." Soft-focus renderings depicted 1920s-style Spanish Colonial casinos (the pre-storm reality resembled oversize highway hotels). Planners sketched a Mediterranean-style fishing village in place of hangarlike fish-processing factories. Perkes, who works with both Stallworth and the East Biloxi Center, explained, "The gap between what's here and what those plans depict is really big, and for many people it's hard to bridge that gap."

The risk of planners promising too much also applied to the unveiling with much media fanfare of several Katrina Cottages, which were intended as a dignified and potentially permanent alternative to the much-derided FEMA trailers. One model, designed by a team working with Andres Duany, of the Coral Gables, Florida–based firm, Duany Plater-Zyberk, was unveiled in severely devastated St. Bernard Parish, southeast of New Orleans. It was made of a water-resistant, insulated-panel system. Duany touted it as deliverable for as little as $70,000, comparable, he said, to costs for installing the much smaller, problem-plagued Katrina trailer. But the independent research that would verify whether this cost was realistic, or that the technologies could be scaled-up to deal with large-scale devastation, had not been done.



A land-banking scheme proposed by a team working in St. Bernard Parish would rebuild first in the higher, southern areas (3), moving north (2, 1) as the population grows.

FEMA trailers actually were supposed to cost on the order of $20,000. To the degree they cost more, it is because of procurement boondoggling, and Katrina Cottages would not be immune to similar mismanagement. Officials have asked the federal government to make the cottages an accepted alternative to trailers (a proposal to add money for 20,000 cottages was floated in Congress), but now that politicians have got their photo ops and the trailer program is winding down, the cottage idea will vanish if they don't live up to their promise, becoming for traumatized residents yet another example of hopes dashed.

"THE SIMPLE ANSWER TO HURRICANES IS TO KEEP PEOPLE FROM BUILDING ON THE OCEANFRONT." *—ROBERT YOUNG*

The Katrina Cottages was a privately financed effort, however, and it laudably opened peoples' eyes to the fact that the grim and fragile Katrina trailer—the product of a military-style civil-engineering mindset—need not be the last word in emergency housing. If FEMA was open to outside ideas for improvement, it would be possible to involve a wide spectrum of architects and tenants alike in finding the best form for temporary housing.

Neighborhoods on stilts?

The October charrette participants in Mississippi had an especially hard time coming to terms with FEMA advisories that demanded raising houses 15 feet or more—especially as many homes that had been raised according to earlier advisories were swept away by the 30-foot-high storm surge. The Biloxi charrette proposed rejecting the FEMA elevations (which are, at least for a year, advisory) in favor of as-yet-unproven "submersible" construction. "My personal opinion," said Harvey, "is we've got to build to the FEMA elevations. My house survived 5 feet of water, but it's the spirit that can't." In

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any event, FEMA does not accept the notion, much-discussed locally, of "houses that can take a swim."

This meant that the plans that people know now, with their classical town squares and trolleyed boulevards lined with trees, don't offer a realistic way to face the key rebuilding question. "It's one thing to make places physically attractive, but one of the messages I am delivering is, can these plans make towns that will survive future storms?" asked Gavin Smith, the director of Mississippi governor Haley Barbour's Office of Recovery and Renewal. "They must marry the mitigation element to the design element." He advised that coastal communities consider not only elevating buildings but "relocating vulnerable properties or guiding development away from hazardous areas."

The idea of entire neighborhoods perched on stilts, hard to take as it may be, has spurred almost no consideration locally of the obvious alternative: setbacks and no-build buffer zones advocated by planners and coastal geologists since Hurricane Camille smashed into the Gulf Coast in 1969. "The simple answer to hurricanes is to keep people from building on the oceanfronts," says Robert Young, an associate professor in the department of Geosciences at Western Carolina University in Collowhee, North Carolina. "Setbacks would reduce a lot of damage, especially from smaller hurricanes." The rub, adds his colleague Joe Kelly, a geologist at the University of Maine who researched the vulnerability of the Mississippi River and the Gulf Coast for the National Academy of Sciences, is "that this is a very political realm, where there are a lot of displaced and financially injured voters, and politicians who want to help them, even if it's not in the public good in the long run." For this reason, says Young, "You'll notice that scientists are rarely invited to participate in the rebuilding commissions."

"IT'S HARD TO BRIDGE THE GAP BETWEEN WHAT PLANS DEPICT AND THE REALITY HERE."
—DAVID PERKES

The extraordinary cost of Katrina may force a paradigm shift on coastal development, especially if the number of violent storms continues to grow, as many scientists predict. Rebuilding also is highly dependent on the continued availability of federal flood insurance, which is supposed to pay for itself but saw a staggering $23 billion loss for Katrina alone—costs taxpayers have had to pick up. This figure does not include the tens of billions paid out by private insurers, as well as rebuilding aid that could total more than $34 billion once Congress finalizes its latest package (it had not yet done so at press time).

Reinventing storm resistance

Even with the new aid funding in the billions, it is likely that some communities will not fully recover, which makes the formerly unthinkable thinkable. Using government power to buy demolished properties at pre-Katrina values and bank them as a flood buffer has often been broached but has never been taken seriously. Buyouts using eminent domain were rejected in New Orleans's "shrinking footprint" debate. Land banking also was proposed in a recent CNU charrette, in the hard-hit St. Bernard Parish, a New Orleans suburb. Properties at the vulnerable north end of the town of Arabi would in the short term become public-domain wetlands and excavated flood-retention waterways, supplying fill so that the more heavily built-up and less vulnerable southern end of town could be raised to a higher elevation and rebuilt at a higher density.

The plan initially floundered on exactly the same concerns that put the "shrinking footprint" idea off limits in New Orleans. Duany, who led the effort, backed off. "In our research, going back to Christopher Wren's plan after London's Great Fire, we found no precedent for erasing old ownership patterns." But, according to Ben Brown, a spokesman for CNU, some middle ground may be possible. "As reality sets in, and residents start moving a little farther from paralytic denial, they seem more open to clustering development, reserving open space, and other ideas that recognize that not everyone is going to move back exactly as before, and that not everyone should."

Young suggests taking the buyout process out of politics by establishing a commission along the lines of the one (known by its acronym BRAC) used to decide which military bases should be closed as obsolete. "It would decide what should be rebuilt and what shouldn't," he said, adding that there is precedent for these actions in England and Wales. He also proposes that residents who insist on living in areas of known vulnerability assume the entire costs of insurance and of rebuilding public infrastructure, which in too many locales has been replaced again and again. "The people building are not the ones paying. It is the taxpayers."

Architect James Dart, a New Orleans native who is now based in New York, sees New Orleans's salvation in, of all things, its much maligned drainage and pumping systems. "It's ingenious, actually, in the way high street curbs hold water until the pumps can catch up," he explained. Many of the planted medians of the city's boulevards (in New Orleans they're called "neutral ground") already roof underground drainage canals, which Dart figures could be reconfigured to retain much of the future floodwaters he sees as inevitable even with the promised sturdier levees. His students at the New Jersey Institute of Technology, in Newark, have studied an idea called "every yard a wetland," which would add enormous (and wildlife-enhancing) capacity to the city's system of open storm ditches and canals.

An appealing story can be assembled from the enormous dedication and accomplishments of the many small-scale efforts, whether Dart's through an architecture school or the East Biloxi Center. But the people on the ground are quick to say such efforts are not enough to add up to a sustainable recovery. WRT's Beckman describes a scenario he's heard a number of times. "A family fixing up their house is told by a neighbor that he intends to let his home sit while he waits and sees. Essentially he is saying, 'I'll leave this mold-infested wreck next door to you.'" It's not a recipe for a robust rebuilding.

New Orleans, Louisiana, and the Mississippi Gulf still struggle to build trust and convene leadership in a way that takes seriously a necessity for change while respecting peoples' values and desires. Almost nothing was done to improve hurricane readiness after the devastation of Camille, and that pattern, without credible leadership, threatens to repeat itself. For many, a path-of-least-resistance rebuilding that avoids the hard questions looks like the only rebuilding alternative. Perkes, on the ground in Mississippi, finds himself pulled in opposite directions daily. "We're exploring innovations and new practices," he says, working with Mississippi State and other colleges. "We're looking at opportunities to build differently. But sometimes you just want to help people make sure they've got a good kitchen layout, even if Home Depot cabinets are the best they can get." ■

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Why the Dutch are **dismantling** their famous **dikes**

As Americans look to the Netherlands, which has developed the world's most sophisticated flood-control structures, the Dutch have decided they've got to live with—even in—the water

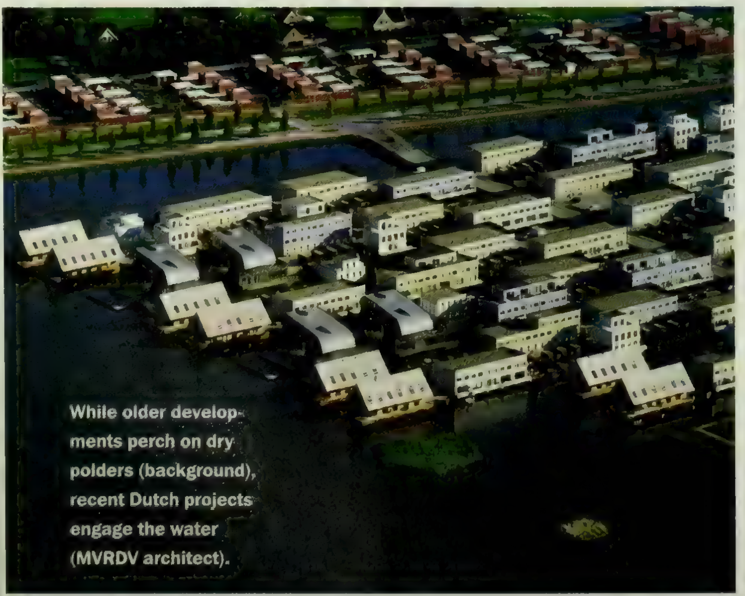
By Tracy Metz

The curving gates and three enormous trusses of the Maeslant Barrier are as tall as the Eiffel Tower and as technologically daring as this cast-iron extravaganza was in the late 19th century. Yet rather than standing in the city, they lie in the river—in Holland's New Waterway, to be precise. When storm-driven waters rise too high, the two curved arms of the Maeslant storm-surge barrier swing into place on ball bearings to block the channel and protect Rotterdam from flooding.

The Maeslant Barrier was a high point in a tour conducted for a delegation from Louisiana, including governor Kathleen Blanco. The officials came to have a look at the Dutch system of keeping out the sea in the wake of the disastrous performance of Louisiana's levee system during Hurricane Katrina. They were visibly impressed, both by the scale of the structures and by the level of government involvement and investment in flood control. They learned that dikes in Holland are designed to resist floods that may occur once in 1,250 or 10,000 years. The Dutch were shocked to learn that levees surrounding New Orleans were only intended to survive a miserly 30-year flood, an especially optimistic risk profile, it seems, given their poor state of maintenance.

Ironically, the storm-surge barrier that so impressed the American visitors may well be the last generation of Holland's technological water management solutions. The Dutch are now looking for less defensive ways to deal with water—not as a foe, but as they now say in Holland, a friend.

One of the first projects to show this new accommodating approach is in the town of Schoorl, amid the dunes northwest of Amsterdam. In the mid-1990s, a notch was cut into the dunes to allow the sea to flow in at high tide and out again at low tide. The idea was to relieve the pressure of the rising sea on the dunes, like the valve on a pressure cooker, as well as to rehabilitate the flora that flourish on the borderline between freshwater (underground) and salt. Simple as it sounds, the idea of cutting into the country's key lines of defense against the sea went contrary to a long history.


While older developments perch on dry polders (background), recent Dutch projects engage the water (MVRDV architect).

As a nation sinks, seawaters rise

Holland's tradition of water management is symbolized by the tale of Hans Brinker with his finger in the dike—a story unknown in Holland itself, interestingly. That is a matter of sheer survival: Without the complex system of dikes, sluices, pumps, and polders (land reclaimed, usually for agriculture), a good half of the country would be submerged. The lowest inhabited area in Holland lies 7 meters (about 23 feet) below sea level, and for centuries planning has revolved around the separation of land and water. Ever since humans began to settle in this soggy delta in the Middle Ages, the Dutch have shoveled to keep the water out; it is even said that the cooperative effort this required laid the foundation of Dutch democracy. The necessity continues to grow: two thirds of the gross national product is earned in the flood-prone areas of the country.

In 1953, 1,800 people died in the Great Flood that inundated the southern archipelago-like province of Zeeland. After the disaster, the nation built a network of dams between the islands called the Deltaworks. The Maeslant Barrier was the last piece of this massive engineering puzzle.

But now, after centuries of pumping, a number of factors are forcing the Dutch to come to terms with water in a different way. The reclaimed land of the polders has continued to sink for a variety of reasons. Outside the levee systems, the waters are rising. Europe is subsiding just as river systems that drain into Holland carry more water from heavier rainfalls. The U.N. Intergovernmental Panel of Climate Change predicts more extreme and unpredictable weather patterns. Rainfall in the Netherlands could increase by up to 25 percent and the sea level could rise 43 inches in this century.

Tracy Metz, an international correspondent for RECORD, *lives in Holland.*

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Making "Room for the River"

With the immediate problem being the rising river waters, the Dutch government abandoned the centuries-old policy of raising the dikes. In 2000, making "Room for the River" became the new mantra. It involves moving the dikes back to widen the flood plain, and lowering the forelands (the land on the riverbed side of the levees). Though most of the forelands are government-owned, it has been necessary to buy out some inhabitants, usually farmers. In one unusual case, the Ministry of Transport made a deal with seventeen farmers to give up their land on condition that they could keep dry homes in the flood plain. The ministry dismantled the farmhouses, then rebuilt them, each on its own hill. More often, making additional space for floodwaters means removing riverbed obstacles. The agencies have relocated raised roadbeds that carry tracks and highways (which otherwise act like levees) or cut openings into the them. They have dug extra channels for water, and they have let water into formerly reclaimed polder land. This paradigm shift is made possible by a budget of 2.2 billion euros, on condition that the prescribed level of protection be achieved by 2015.

Another stipulation of the Room for the River program was that its work should not come at the sacrifice of valuable features of landscape, nature, and cultural history, which has inspired a holistic (but time consuming) regional planning approach, taking into account not just settlements but recreational opportunities, transport infrastructure, and natural reserves.

Amphibious houses and "calamity polders"

As in America, alternative flood-control measures can be controversial. One government committee proposed "calamity polders"—areas set aside for emergency water retention. Municipal governments are not at all eager to remove lands from profitable uses that voters clamor for, like housing or business, for what they perceive as a vague threat of inundation that may or may not materialize, at least during their time in office.

What's called The Blue City, in the northern province of Groningen, suggests that long-held Dutch attitudes about living with water are changing. The economy of the region had been declining for years. As a last-ditch attempt to bring in new inhabitants and—it was hoped—new jobs, local officials decided to dig out an old field for a big new lake with housing around it. The project is not so much about environmental restoration—although the water will provide a more diverse natural environment—as it is about using water, and its attraction for development, instead of land.

Such a turnaround still shocks many people: Hadn't the sweat of their grandfathers' brows reclaimed this very land so it could feed their families? The debate went on for years, but last year Queen Beatrix ceremonially opened the pipes to let the water in, and some of the housing is now on the market. Whether The Blue City will indeed be able to turn the economy of this part of the country around remains to be seen.

Nevertheless, rising waters are spurring the creation of a new niche market in floating housing. After three years of negotiations with Rijkswaterstaat (the Dutch equivalent of the American U.S. Army Corps of Engineers), the construction company Dura Vermeer was given a permit for the construction in the Maasbommel River of some 40 "amphibian" houses designed by Factor Architects. The same company has also begun a pilot project to develop a floating greenhouse (essential to agriculture in a cloudy climate), and has started planning a city for 12,000 inhabitants that would float near Schiphol airport. Dura Vermeer believes that 40 percent of Holland's building needs over the next 50 years could be met by building on water.

The 35-year-old architect Koen Olthuis focused on floating architecture when he started Waterstudio.NL three years ago. Business really picked up for him after Katrina. Some private floating homes have been completed—he worked with Dura Vermeer on a completely "waterproof" neighborhood near Gouda. They differ from conventional houseboats in being able to rise to a considerable height on floodwaters, using umbilical connections for utilities.

Olthuis's ambitions reach further. He has imaginative plans for floating parking garages, vacation complexes, and apartment buildings. He has taken out a patent on a procedure for the construction of a floating building pontoon made from Styrofoam wrapped in concrete. At the moment, he is one of two runners-up for the construction of a string of islands that would be built with this new technique to form a circle of Arabic words in the new super deluxe Palm Island development off the coast of Dubai.

The Dutch are far from being fully converted to the cause of living with the capricious ways of water. Both insurers and mortgage bankers, for example, are not yet fully convinced that the problems of water dwelling have yet been solved. Like their U.S. colleagues, Holland's water-management professionals worry that the general public has yet to come to terms with the seriousness of the issue that lies ahead. Most of the people now alive have never experienced a serious flood and blithely assume that government and the engineers have solved the problem. For many, the struggle against water is little more than a picturesque national symbol, along the lines of tulips, clogs, and windmills. However long the dikes were supposed to have lasted on paper, the experts warn, practice in this era of rising waters may trump old assumptions.

In 1993 and 1995, the serious threat of tragic floods was a nasty surprise, a wake-up call many fear has yet to be heeded. Water may have gone from being a foe to a friend, but it's rather a fickle one. ■

A community of 12,000, built with pontoon technology like that used by Waterstudio.NL (examples, this photo and above), may float near Schiphol airport.

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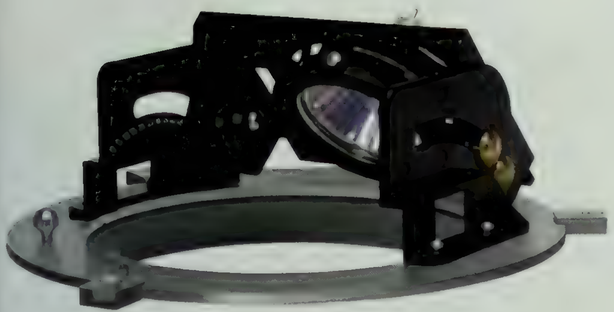

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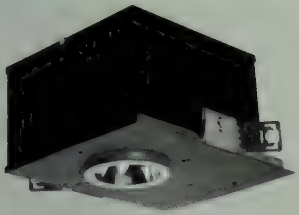

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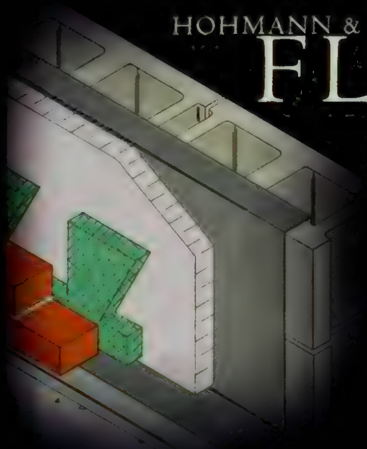

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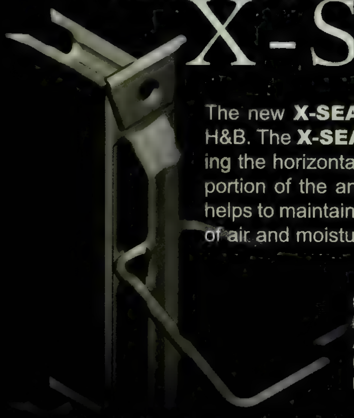

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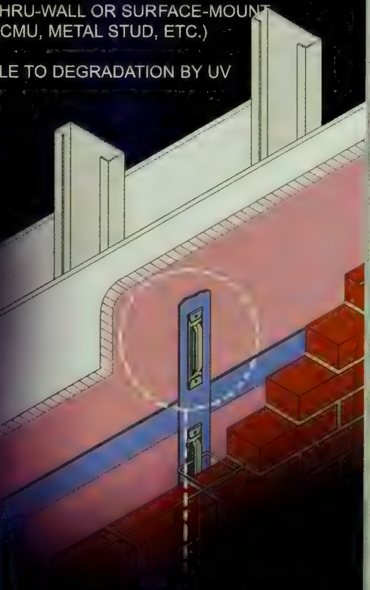

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American Institute of Architects

2006 Honor Awards

Architecture p. 152
Interiors p. 174
Urban Design p. 192
25 Year Award p. 200
Firm Award p. 202
Gold Medal p. 212

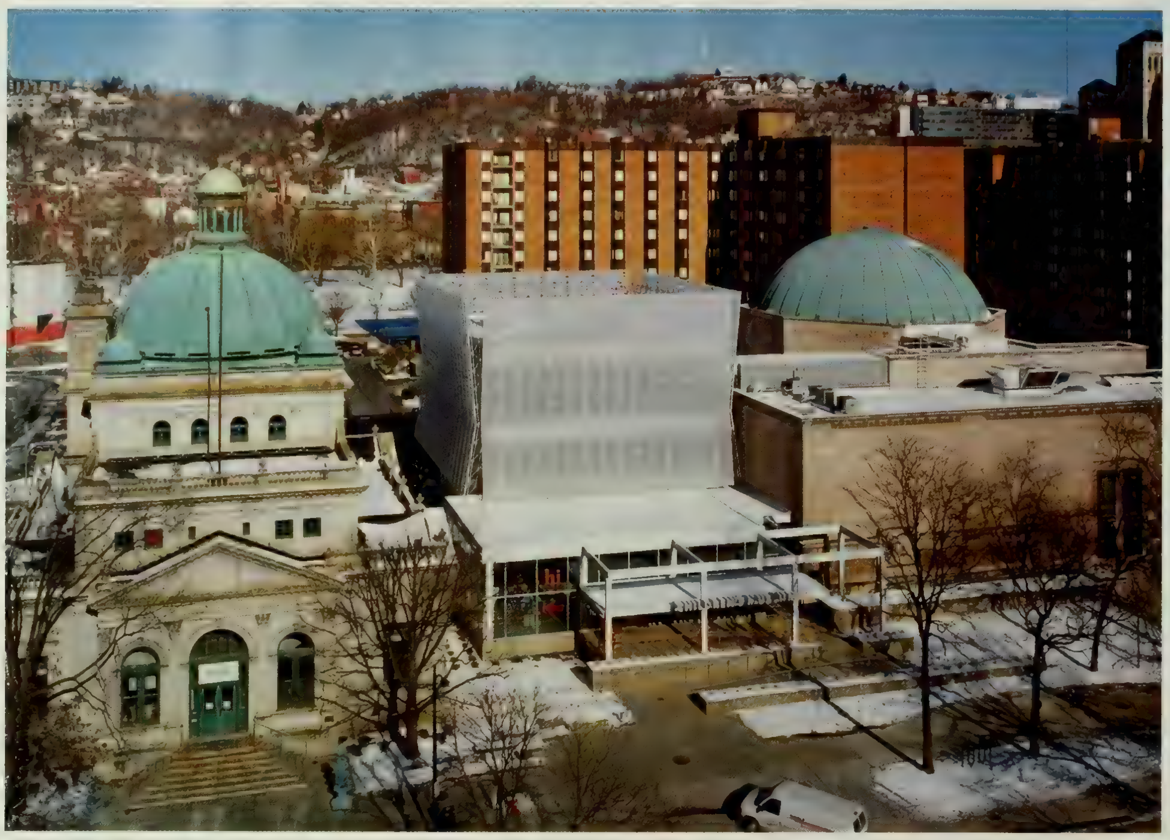
There's a heady dose of Modernism in this year's AIA Honor Awards. Clean lines and restrained material palettes are evident in both the architecture and interior design categories. One can even detect a whiff of Brutalism in the bold, expressive work of Antoine Predock, FAIA, this year's Gold Medalist. This may sound like a series of design flashbacks, if we can call them that, to the 1950s and '60s—but neither spare lines nor compositional rigor seem to have gone out of style in the past 60 years. Jurors also praised the way projects respect, and in many cases help heal, their surrounding neighborhoods—a hallmark of much 21st-century design.

Another very contemporary characteristic that this year's projects share is a sensitivity for ecologically sound schemes. Sustainability is especially evident in the urban design category. Moore Ruble Yudell's University Square, for instance, features an "eco-stream" to capture and recycle rainwater at the campus of the University of British Columbia. Moore Ruble Yudell, incidentally, also snagged the Firm of the Year Award.

Even the old-timers among this year's winners showed they're green at heart. In the architecture category, SRG Partnership and associate architect Einhorn Yaffee Prescott proved that LEED standards can be applied successfully while rehabilitating an 80-year-old building—in this case, the Washington State Legislative Building. And Fay Jones & Associates' Thorncrown Chapel, which won the 25 Year Award, remains a study of how a building can harmonize with the landscape, and reflect the sublime.

On the following pages, we present the 2006 Gold Medalist, the winners of the 25 Year Award and the Firm of the Year Award, and the 11 architecture, 11 interior design, and eight urban design honorees. For those who keep score, all categories totaled 685 entries. *James Murdock*

ARCHITECTURE



Children's Museum of Pittsburgh
Pittsburgh
Architect: *Koning Eizenberg Architecture; Perkins Eastman Architects (architect of record)*

A 1930 planetarium was adapted and merged with an 1897 post office to form 80,000 square feet of museum space. A new, three-story contemporary steel-and-glass structure joins them. This addition houses exhibition space and is encased in a shade composed of thousands of 5-inch translucent panels that flutter in the wind and provide cover during the day. At night the skin becomes an illuminated lantern. Inside, a plethora of interactive exhibitions encourage children to take part. This "playing with real stuff" philosophy asserts the value of experiential and hands-on involvement. Steel grate

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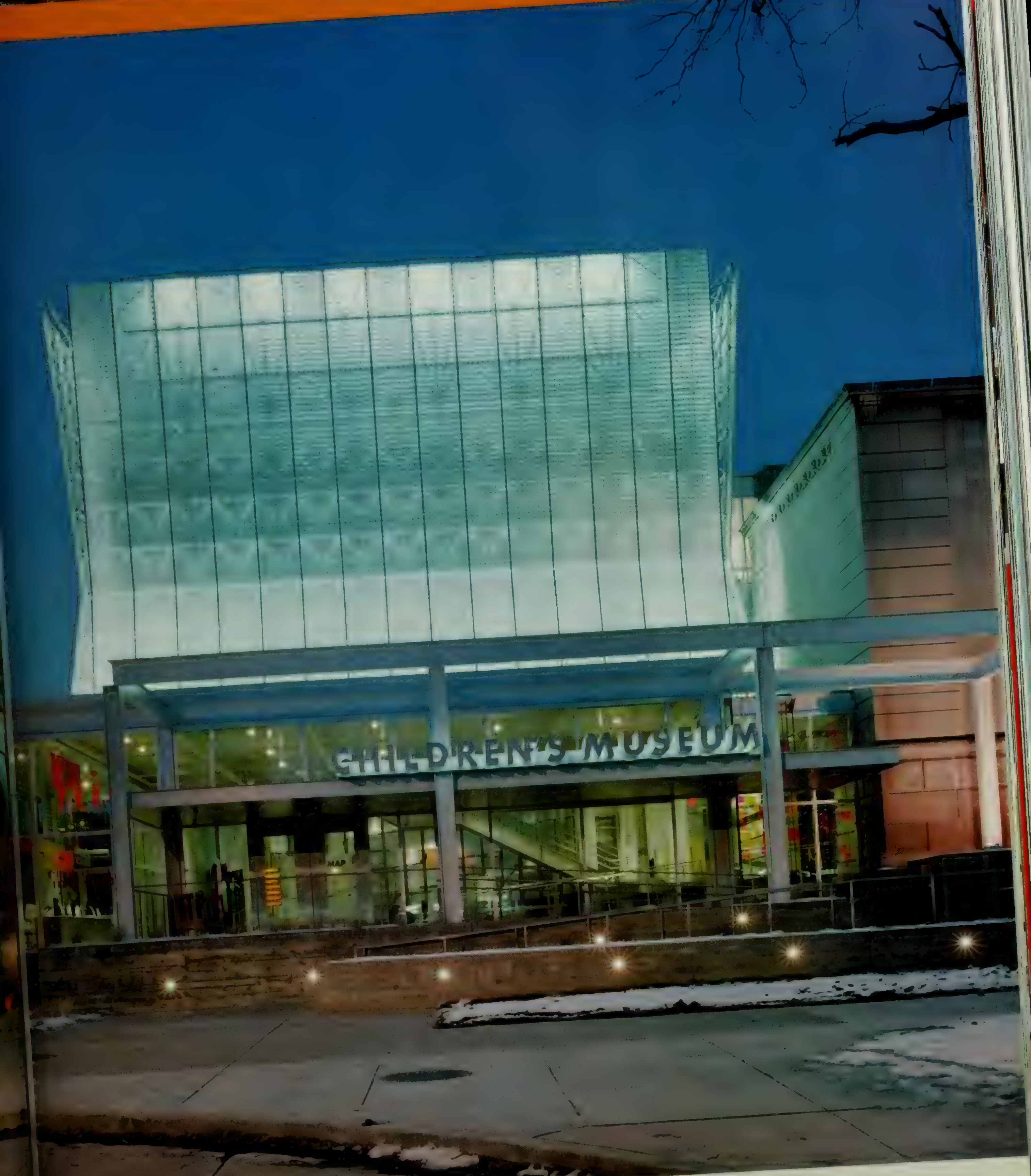
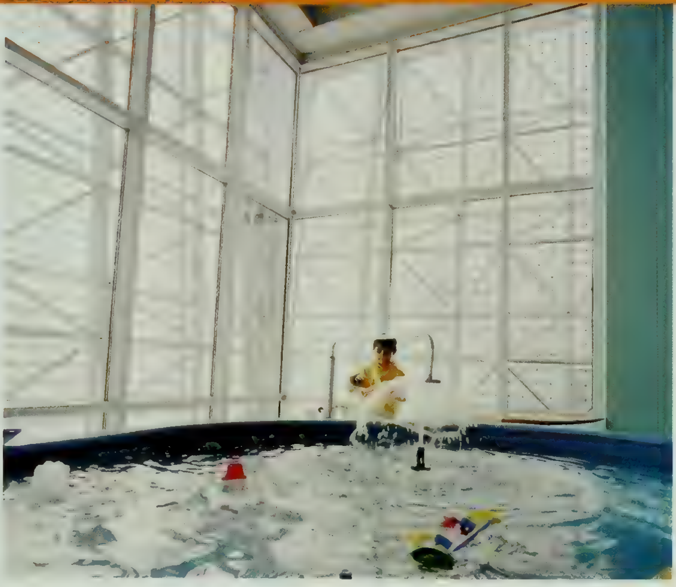
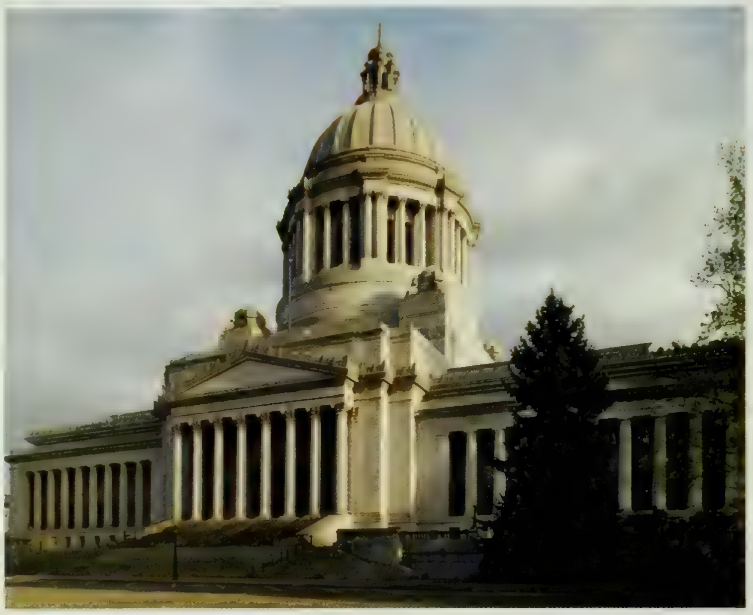
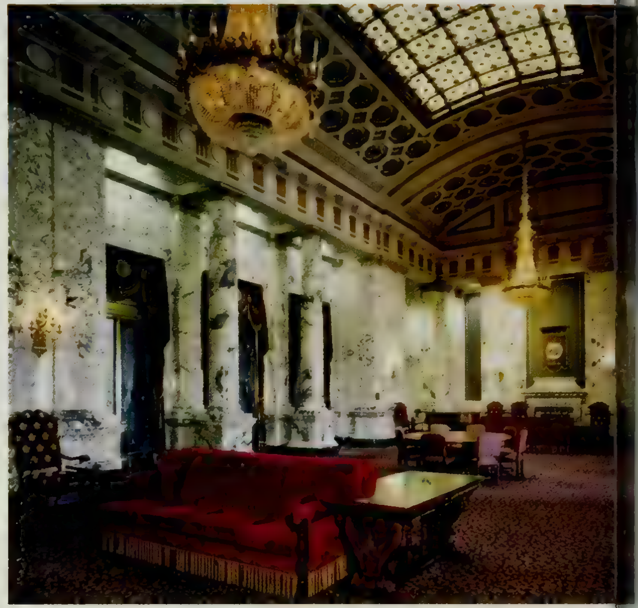
PHOTOGRAPHY: © ALBERT VECERKA/ESTO (CHILDREN'S MUSEUM)


CHILDREN'S MUSEUM
MAP

ramps heighten the sense of travel and engagement, contributing to the building's role as a vessel for discovery. From the east end of the post office, a tunnel provides a view into the veranda and beyond to the planetarium building, which unites both new and old elements as well as inside and outside spaces. This is the first LEED-certified children's museum in the U.S.

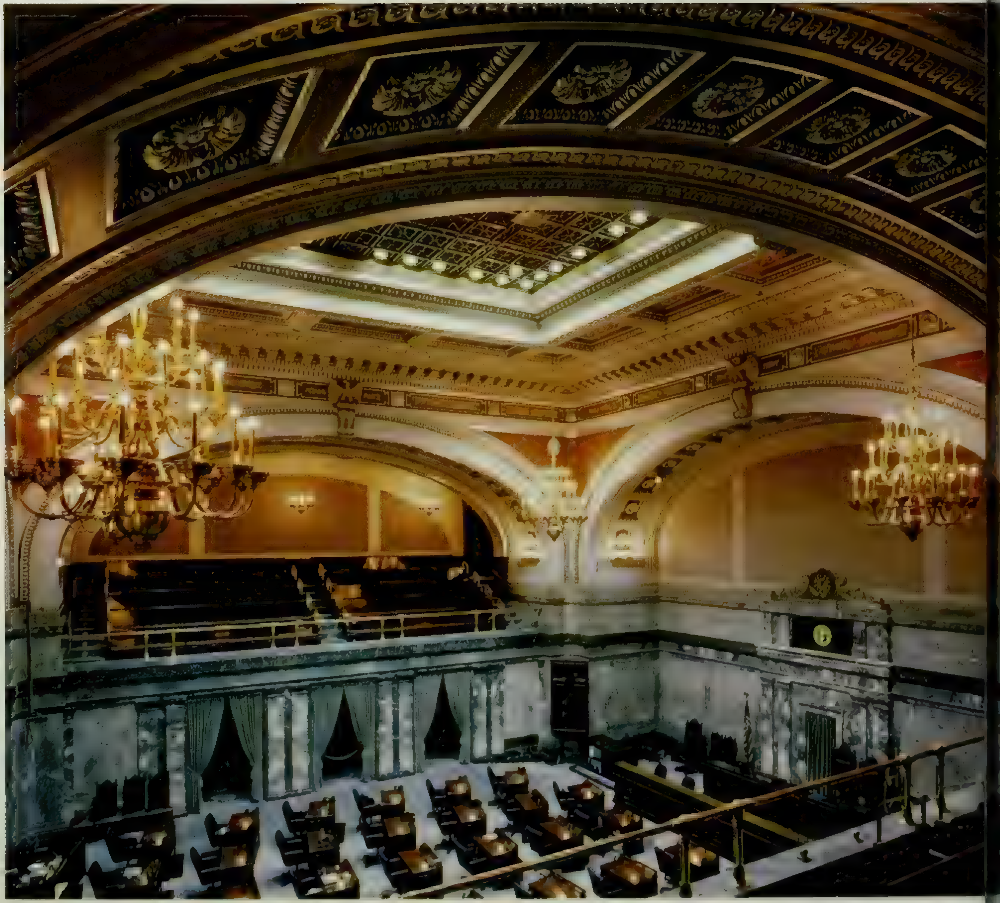


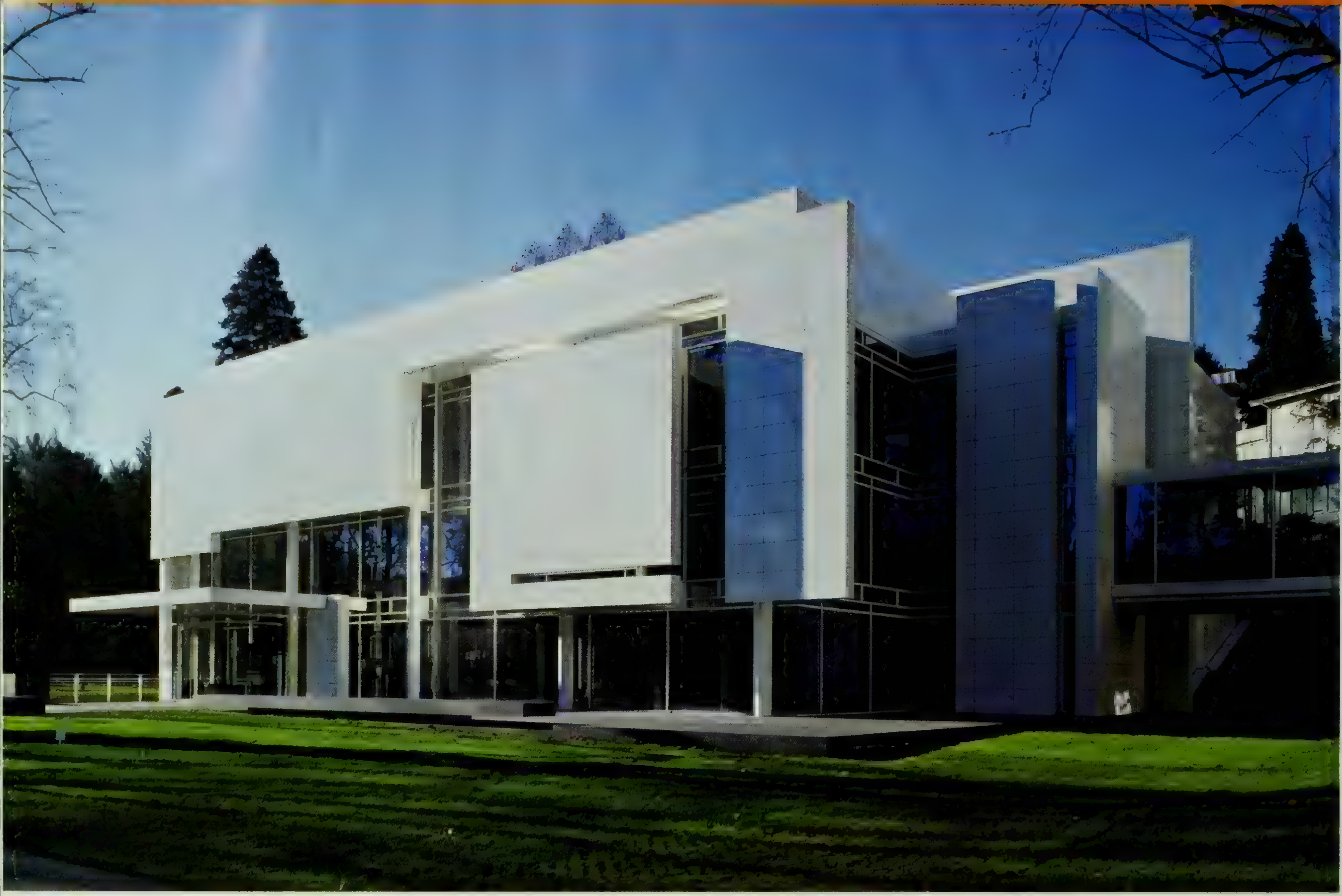




Washington State Legislative Building Rehabilitation
Olympia, Wash.
Architect: *SRG Partnership; Einhorn Yaffee Prescott (associate architect)*

Originally designed by architects Wilder and White, built in the 1920s, and damaged by an earthquake in 2001, this capitol building is now restored to its original grandeur and prepared to weather the next 50 years. Interior improvements to the 300,000-square-foot brick-and-stone structure included restoring a skylight in the state reception room, repairing intricate plaster detailing, and enclosing an existing stair in fire-rated glass to meet fire safety requirements while maintaining openness. LEED standards were applied to the renovation of this historically significant building. The architects thoroughly documented their design process in an effort to further the understanding of reconciling LEED parameters with the challenges of historic-building renovation.





Frieder Burda Collection Museum
Baden-Baden, Germany
Architect: *Richard Meier & Partners; Freier Architekt (associate architect)*

The jury praised this project as an example of how Modern architecture can fit within historic places, noting the harmonious scale of the new, 21,000-square-foot building in context with a nearby city park and adjacent building. The older structure, known as the Staatliche Kunsthalle, was completed in 1909 by the architect Hermann Billing. The new steel-and-glass building, clad in white enamel metal panels, connects to the Kunsthalle with a glass bridge. Situated along the town's most famous avenue, Lichtentaler Allee, on a site rich with aged trees, the task was to blend in with history

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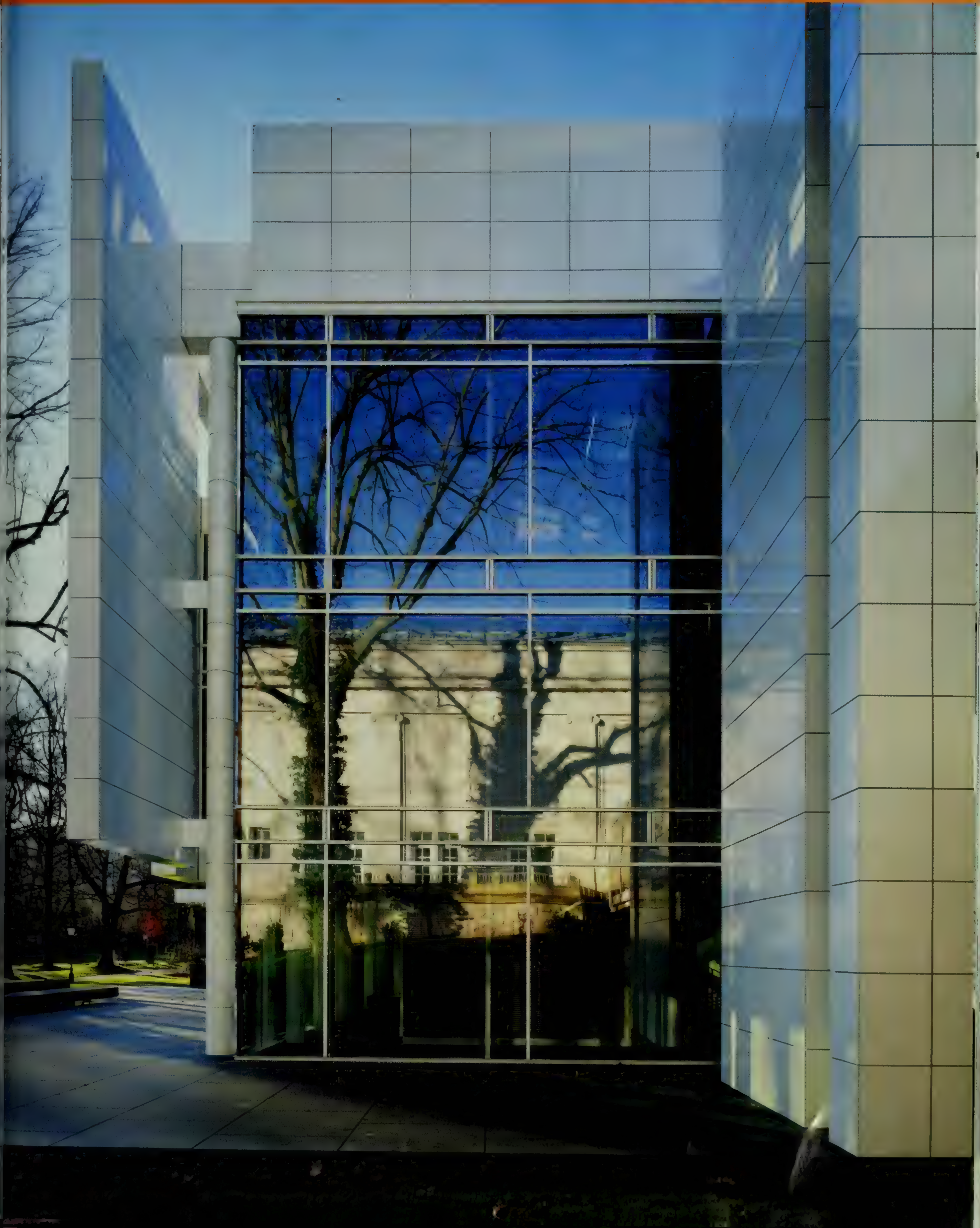
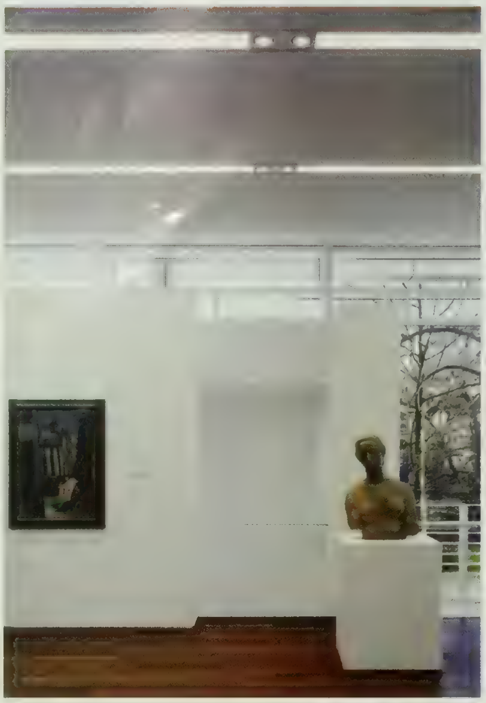
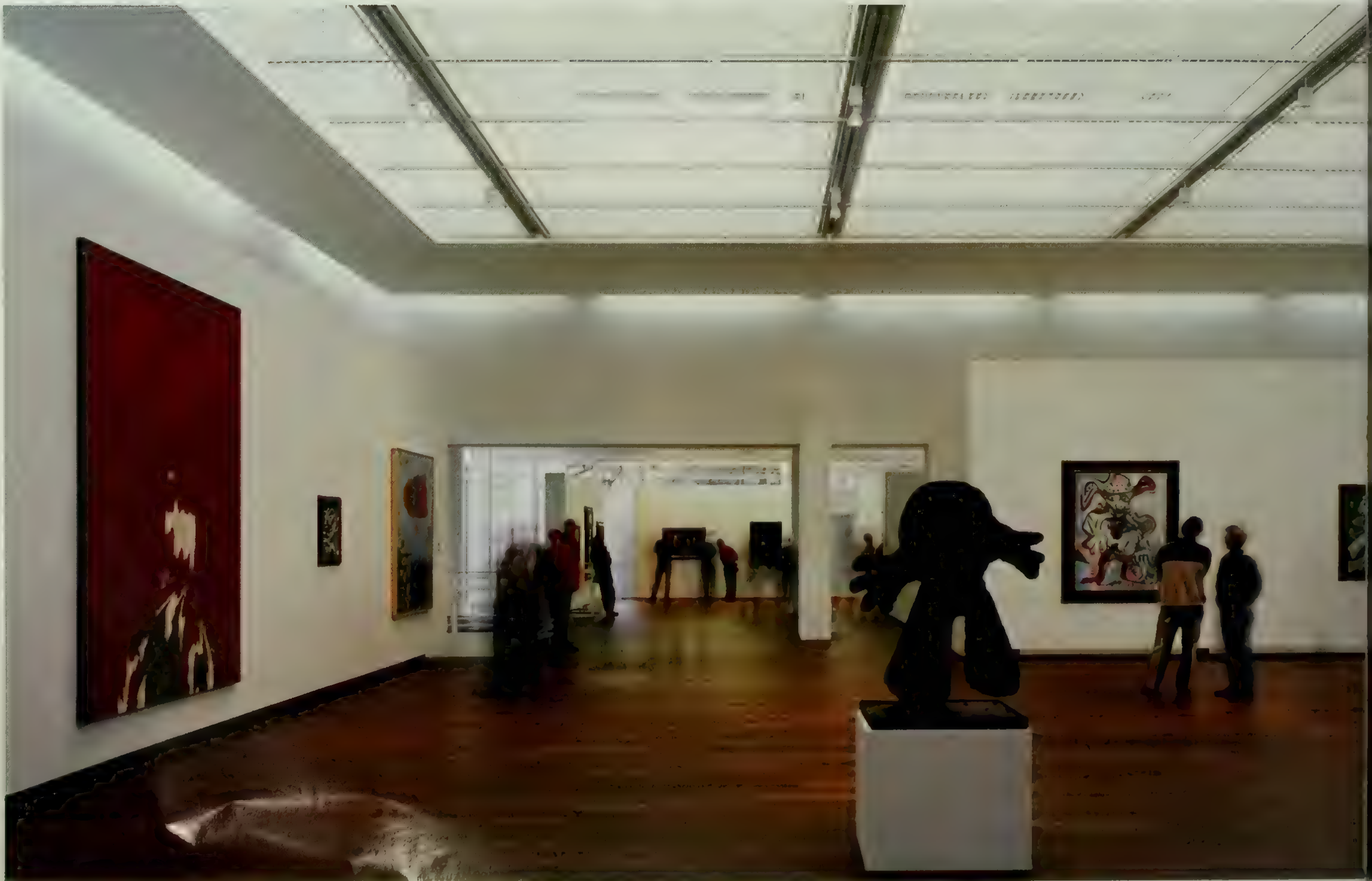
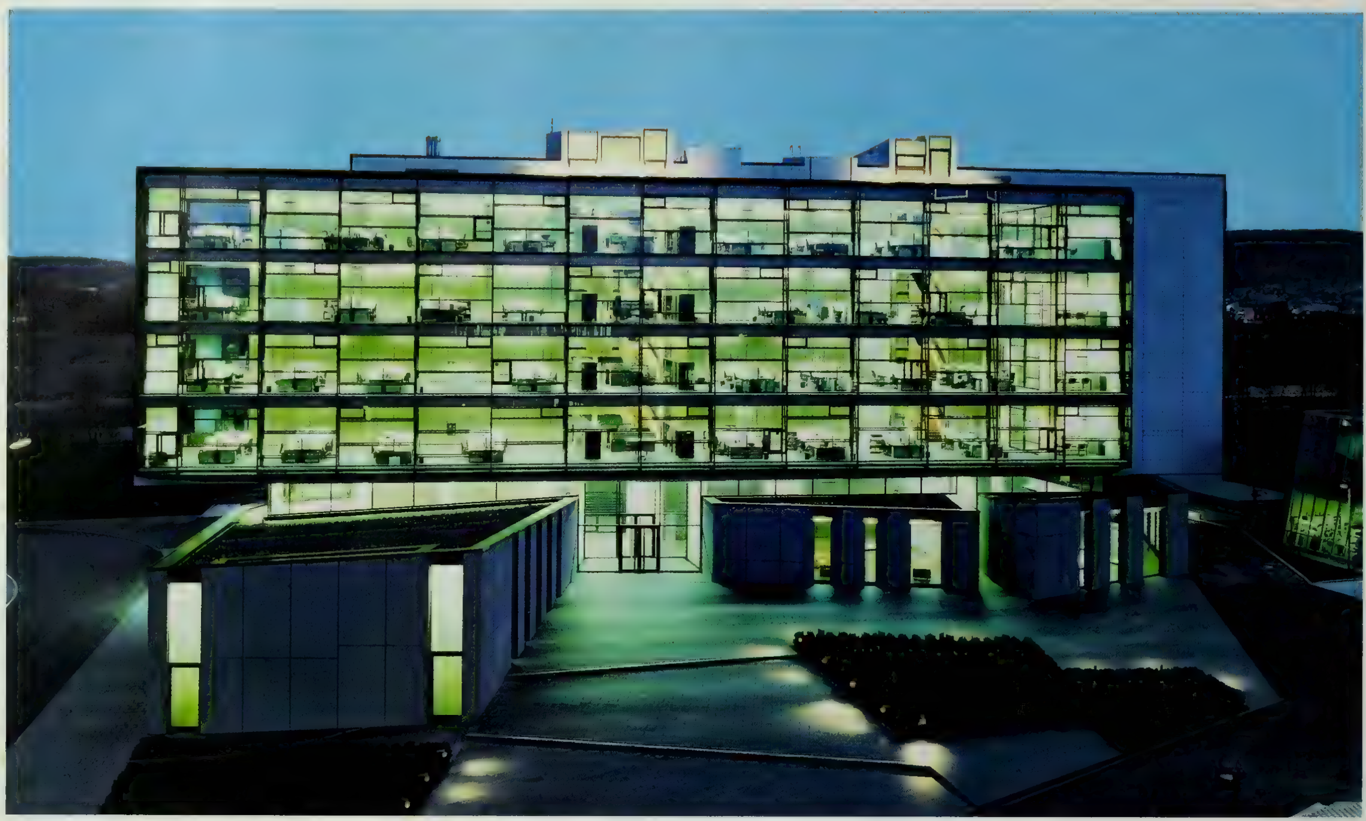




while forging a Modern identity for the building and the 500 paintings it houses. The lobby of the museum enjoys clerestory light, owing to recessed floor plates. From this space, visitors progress either to the ground-floor exhibition area or onto the vertical-ramp hall that leads to the mezzanine and upper-level galleries. Louvered skylights allow adjustable amounts of daylight into the upper floors so that the impact on the art collection, which ranges from classic Modernist works to contemporary art, can be carefully controlled. A reflecting pool sits to the south and east of the building, reinforcing its connection to nature.





TRUMPF Customer and Administration Building
Ditzingen, Germany
Architect: *Barkow Leibinger Architects*

The client, a high-tech machine tool company, required a new, 100,000-square-foot building to be located in their existing office ensemble, designed in the 1970s. The three first-floor volumes of the building house the lobby, auditorium, and exhibition space, while five floors of office space tower over them. To link the work spaces for 300 employees, the architects eschewed full floor plates in favor of a split-level plan with shifting floor plates. The jury found this system inventive because it allows the stairs to serve as interactive places as well as circulation routes. Keeping the number of doors and partition walls to a

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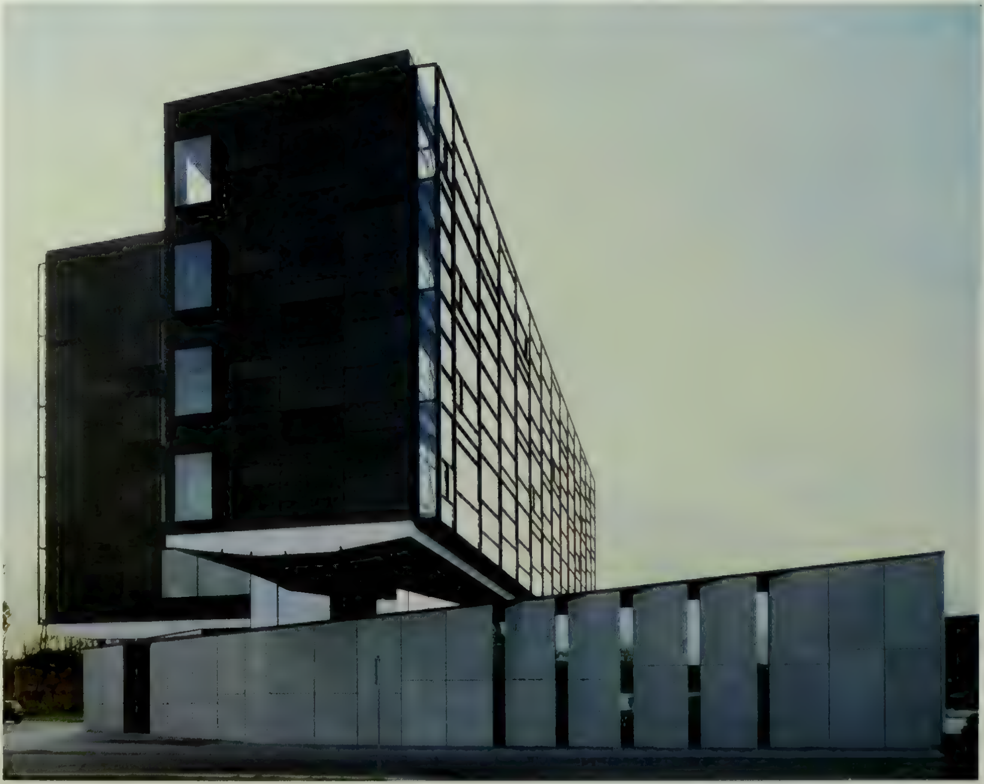
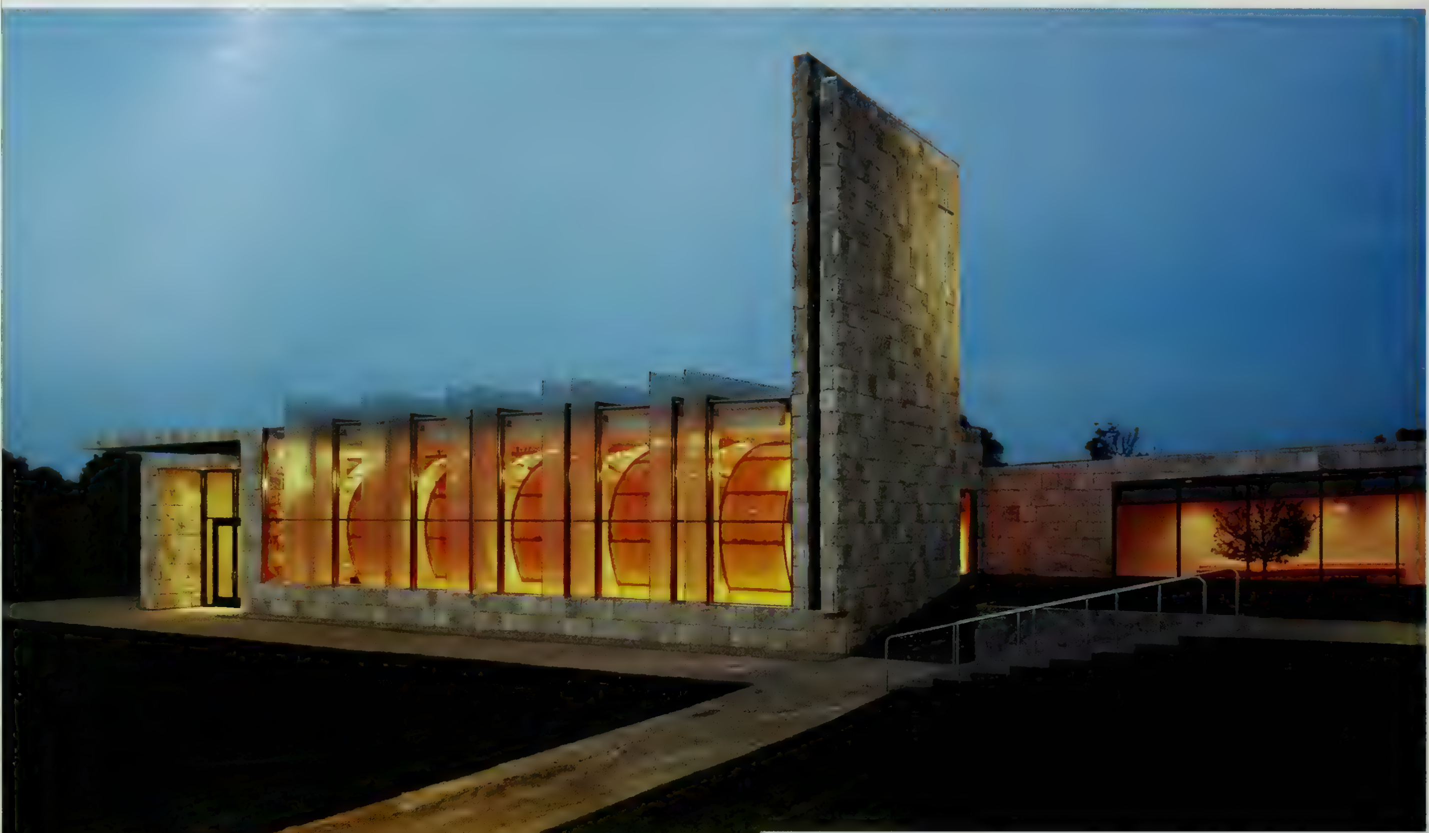
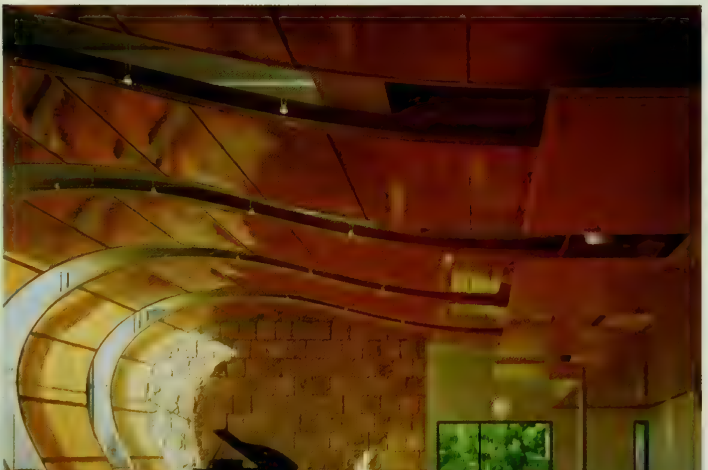


minimum allowed for an open plan that promotes a team-oriented work environment. The building's double-glass curtain-wall facade provides a thermal buffer zone that expels hot air in the summer and retains warmth in the winter while also providing an acoustic barrier to the nearby autobahn, even when the windows of the inner facade are open. Between the two layers, the sunshades are protected from the elements. The transparency of the facade allows the building a unique visibility and permeability, especially at night.

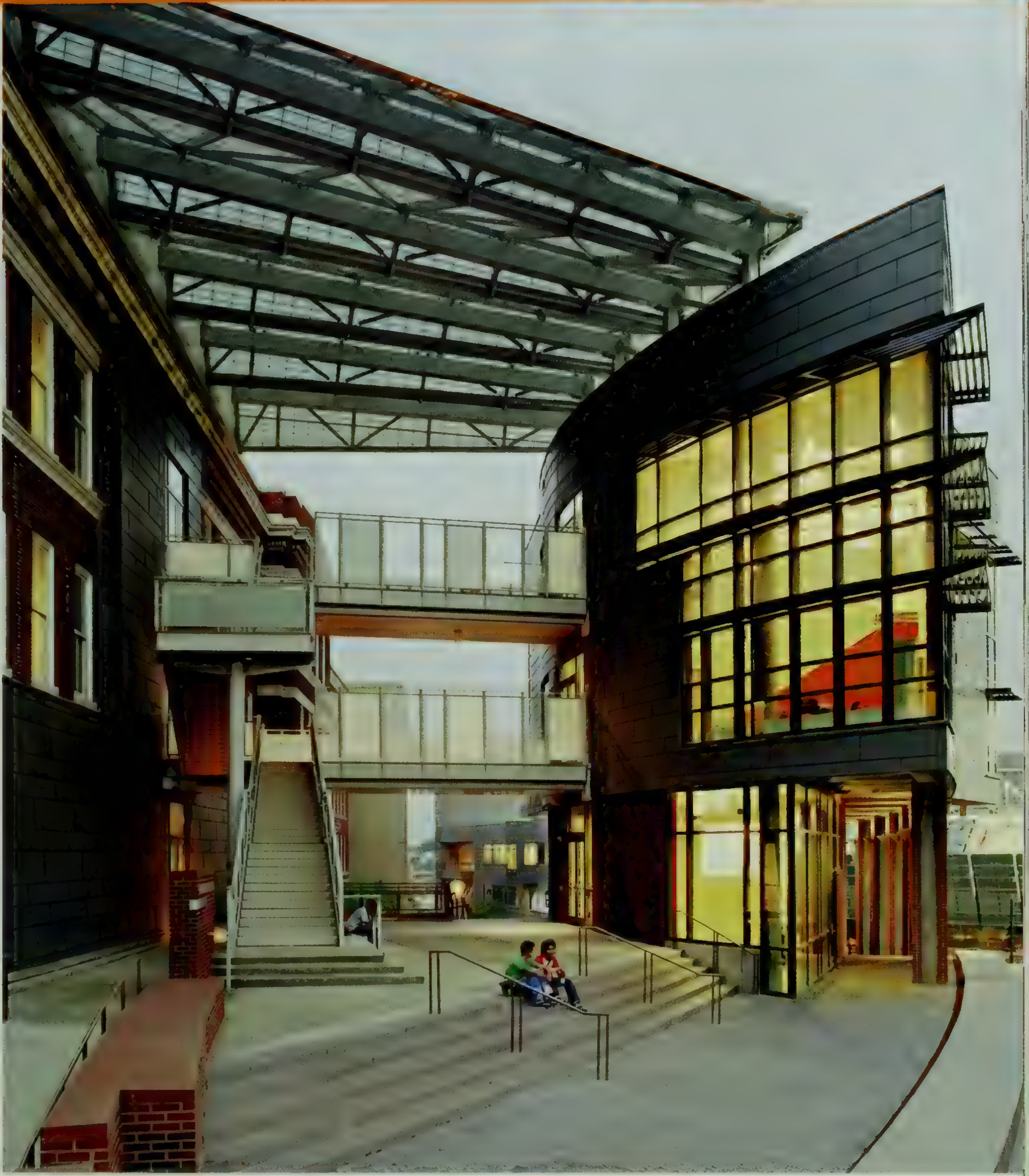


PHOTOGRAPHY: © PAUL WARCHOL (BIGELOW CHAPEL)



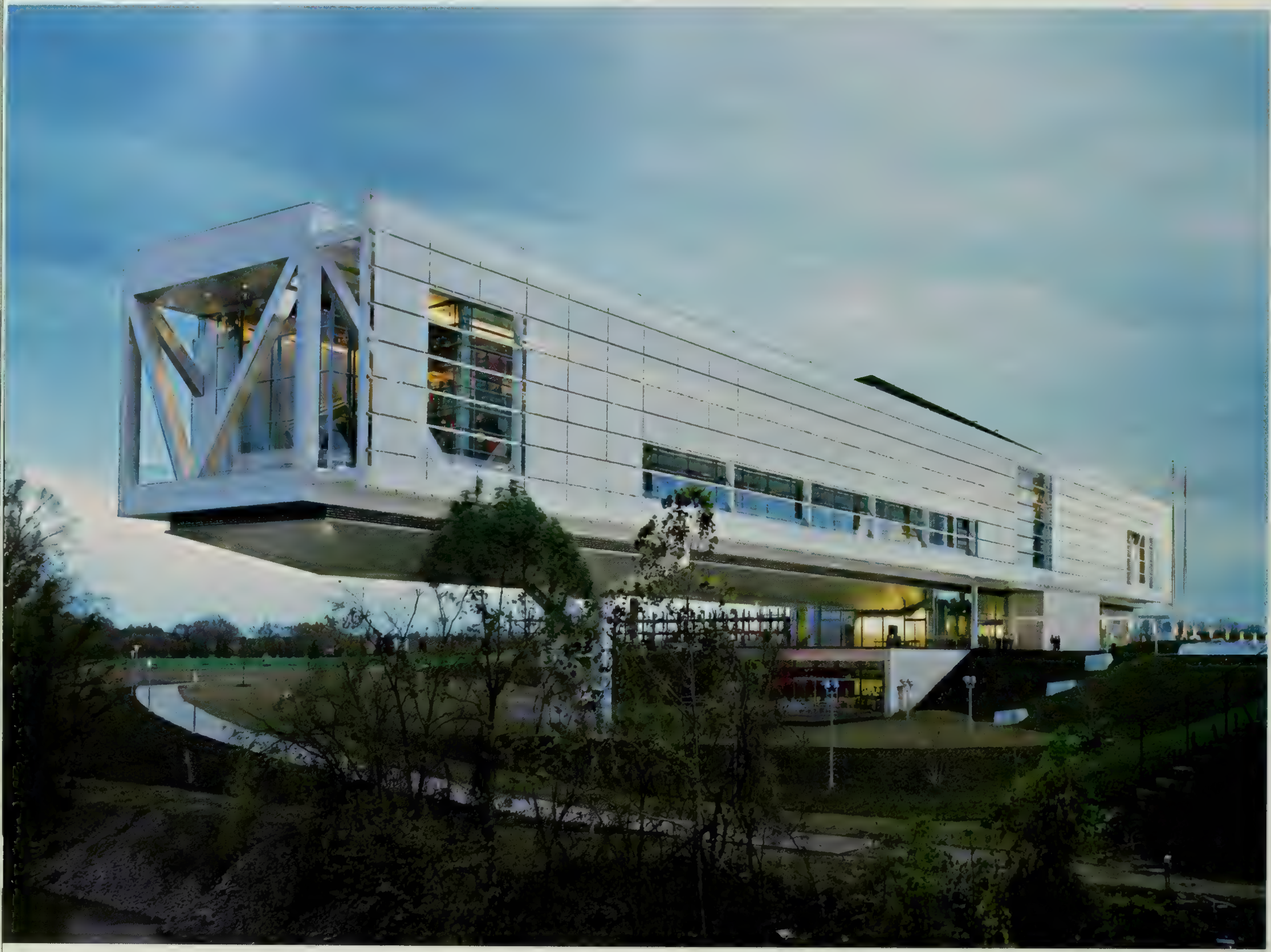
Bigelow Chapel
New Brighton, Minn.
Architect: *Hammel, Green & Abrahamson [RECORD, May 2005, page 236]*

On an 11-acre religious campus, the architects designed a 5,300-square-foot chapel that serves a multidenominational community. In this Modern structure, a curving wood frame wraps the interior of the sanctuary and allows sunlight to enter through maple veneer panels; the exterior cladding is composed of precast concrete panels that look like stone. A bell tower stands 42 feet high and responds to the height of the library that sits across the lawn to the west. The tower rings with five chrome-plated-bronze chimes and anchors the building to the rest of the complex. Three gardens function as transitional spaces between the chapel and the neighboring buildings on campus.



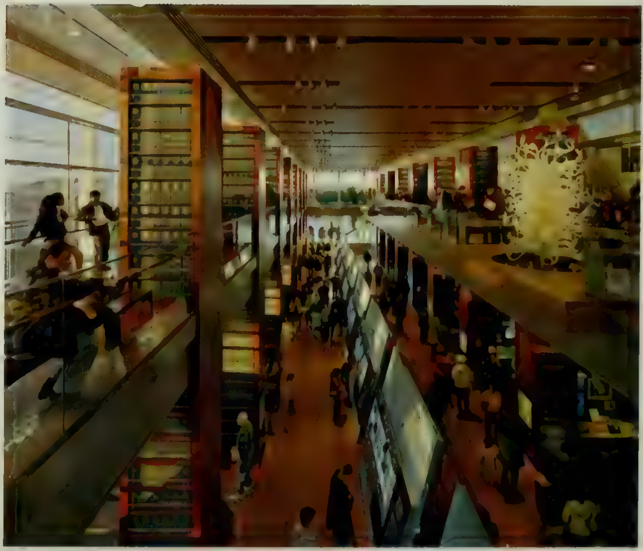
Joseph A. Steger Student Life Center, University of Cincinnati
Cincinnati
Architect: *Moore Ruble Yudell Architects & Planners; Glaserworks (associate architect)*

By restoring a 1920s brick classroom and designing new spaces for administrative classrooms, computer labs, retail, and food service, the architect (this year's Firm of the Year Award winner, page 202) created a 114,700-square-foot building, functioning as a spine of campus activity organized along major pedestrian and topographical paths. Part of a multibuilding "main street," the project's ground-level arcade offers a "front-porchlike" space for student groups to gather in. Views toward the campus gardens and terraces enliven the indoor space, while large windows, bays, and galleries allow the social activities inside to remain visible to those on the outside traversing the adjacent walkways.



William J. Clinton Presidential Center
Little Rock
Architect: *Polshek Partnership Architects; Polk Stanley Rowland Porter Architects, Wistell Evans Rasco Architects & Planners, Woods Caradine Architects (associate architects) [*RECORD*, January 2005, page 111]*

In a radical departure from the more traditional presidential libraries, the bridgelike form of this glass-and-metal building reflects a progressive approach to defining the eight-year tenure of its patron. Conceived as a metaphor for the city's "six bridges," the upper portion of the 80,000-square-foot structure extends to the river by cantilevering over an earthbound section below it. By elevating the main body of the library, the designers were able to create a park with the land underneath. The upper portion of the building houses interactive exhibitions. Below grade, an archive shelters documents and artifacts in a stone-and-concrete structure. The site, east of downtown, was selected in order to rehabilitate and revitalize the area and anchor plans for more development. As part of this initiative, the riverfront park will link to and extend a group of parks along the river.



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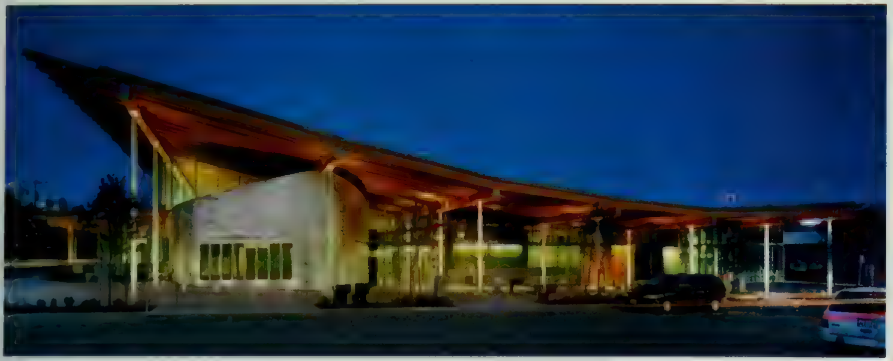
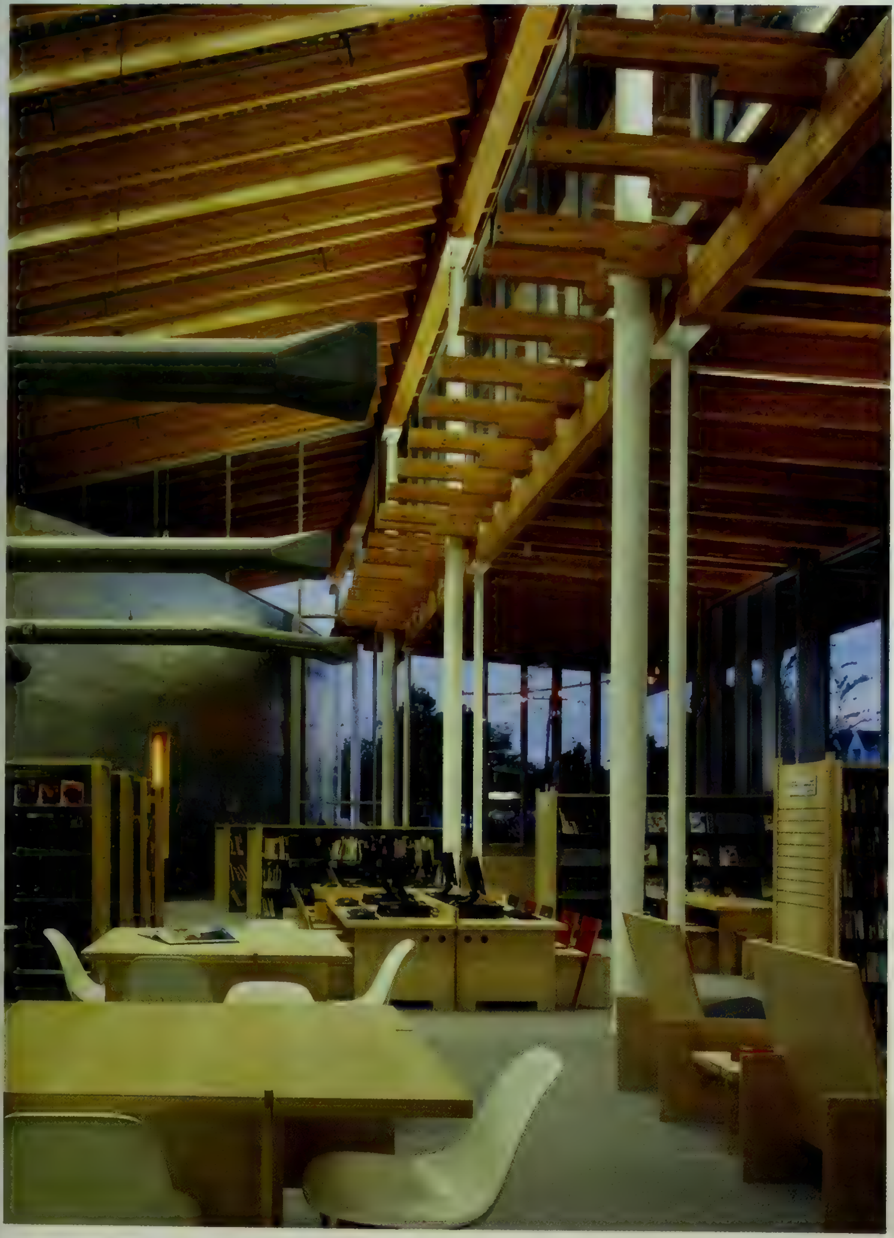
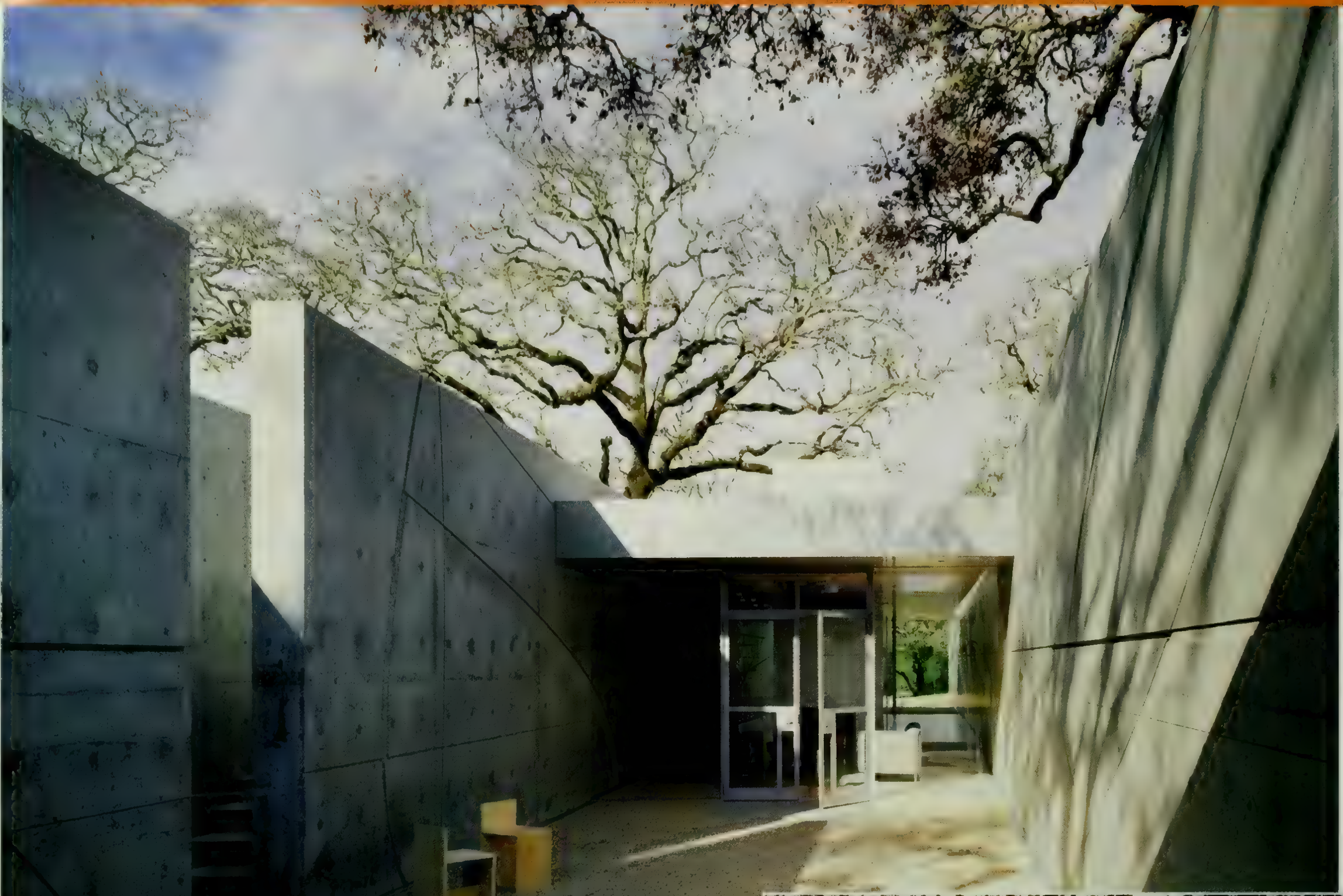




Ballard Library and Neighborhood Service Center
Seattle
Architect: *Bohlin Cywinski Jackson [RECORD, May 2006, page 158]*

The 15th branch to be built under Seattle's "Libraries for All" bond measure, this 15,000-square-foot library with a 3,600-square-foot neighborhood service center includes such sustainable design elements as a green roof, photovoltaics, and recycled materials for interior finishes. It forms a powerful civic face along the street with a huge, upwardly arched roof supported by enormous wood rafters, which cantilever out to cover the building, the attached neighborhood center, and an outdoor community space. A tall, curved structure covered in galvanized-steel shingles creates a meeting room and anchors the northwest corner of the building.



Visiting Artists House
Geyserville, Calif.
Architect: *Jim Jennings Architecture [RECORD, April 2003, page 146]*

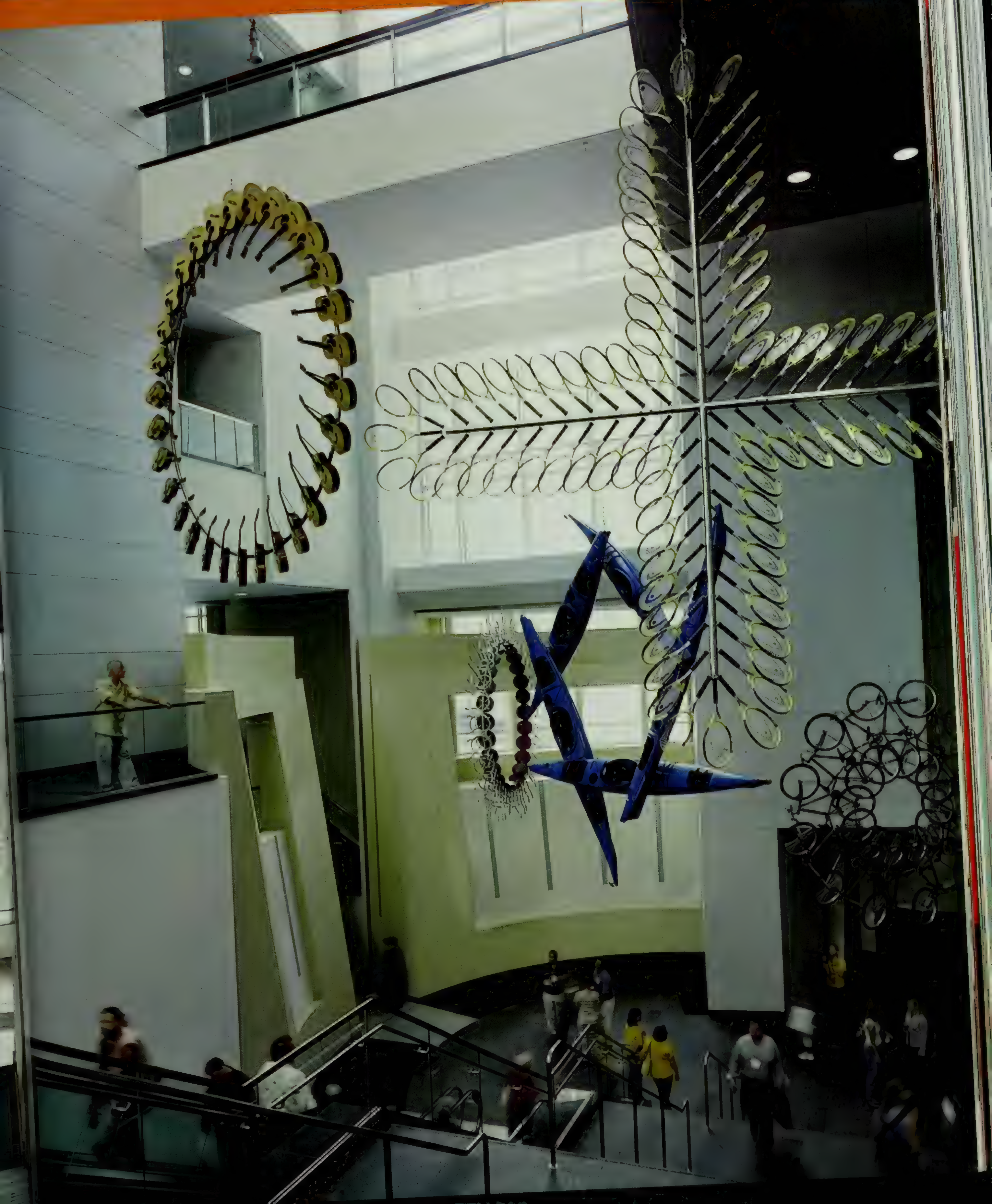
A Record House of 2003, this 17,000-square-foot structure, located on a former sheep ranch, features two poured-in-place concrete walls that slice through a hill and serve as retaining walls. The walls appear parallel at first, but diverge as they stretch toward a lake on the property and converge in the opposite direction to frame a view of a statue by David Rabinowitch. In between the two 14-inch walls, two suites, designed as residences for artists commissioned to work on-site at the ranch, are composed of glass curtain walls, steel cross beams, and metal roof decking. Narrow skylights allow light inside, while separate roofs bridging the walls create dual glass-and-steel pavilions for outdoor living, which share a subterranean central courtyard.

Museo Picasso Malaga
Malaga, Spain
Architect: *Gluckman Mayner Architects; Camara/Martin Delgado Arquitectos (associate architect) [RECORD, October 2004, page 132]*

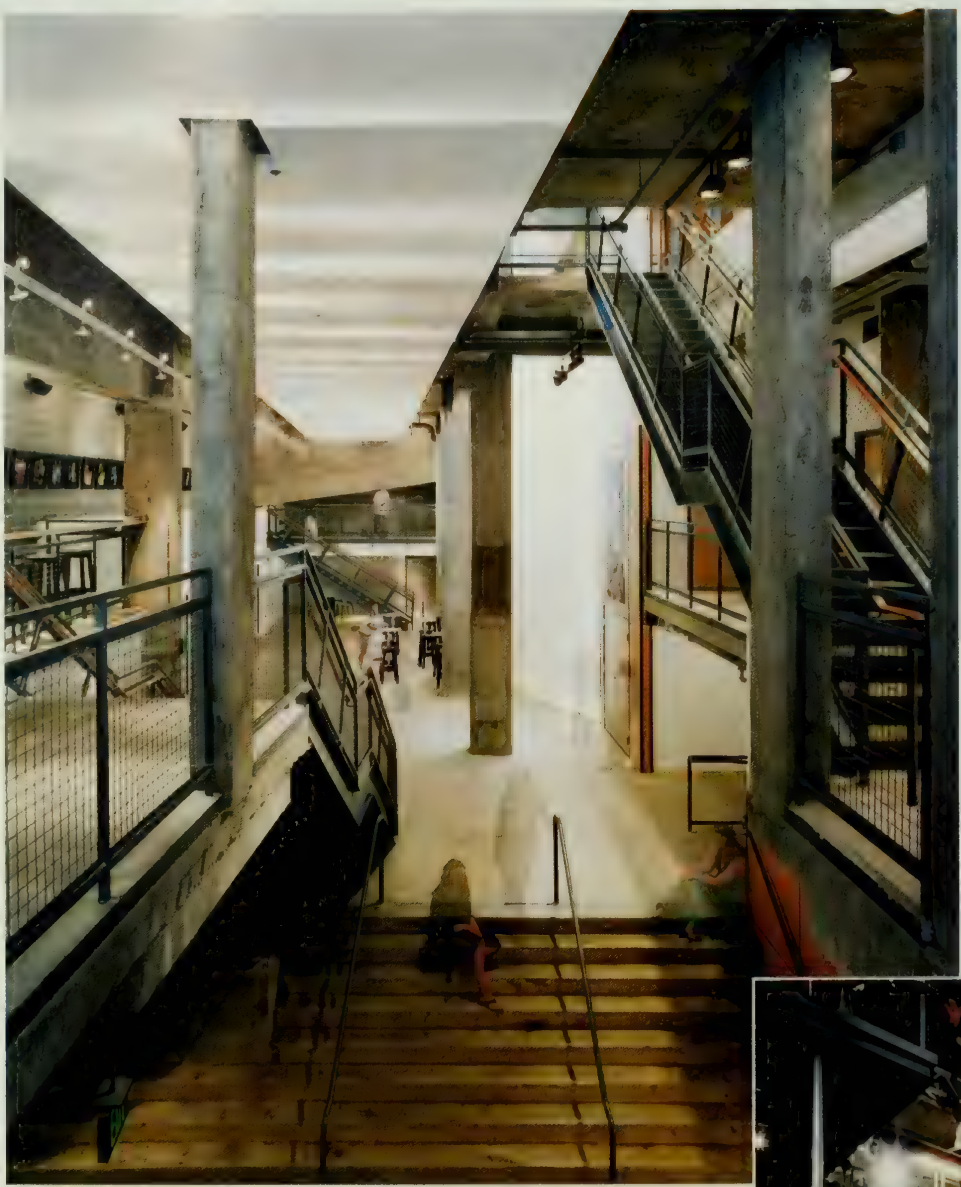
The historic city center of Malaga was Pablo Picasso's birthplace and is home to a new museum dedicated to his work. Consisting of six new buildings in addition to a restored 16th-century structure, the museum totals 80,000 square feet. A series of outdoor areas orients visitors and assists them in navigating through the spaces. This includes a new public park, a cloistered courtyard, and a public plaza. The lower level of the museum houses Phoenician ruins, uncovered in preconstruction excavations and now preserved for guests to view. In addition to both temporary and permanent exhibition areas, a café, reading room, theater, education center, and bookstore contribute to the multifaceted building complex.

Washington Convention Center
Washington, D.C.
Architect: *TVS - D&P - Mariani; Thompson, Ventulett, Stainback (associate architect)*

As the largest enclosed gathering place in our nation's capital, this project consists of 2.3 million square feet of building space sited on six contiguous vacant lots. Fitting all program elements into the building envelope required a vertically stacked structure using long-span steel trusses. Excavating 60 feet into the earth created below-grade exhibition space. Above the street level, which contains the lobbies, registration areas, and meeting rooms, a second story of exhibition space is stacked. This siting allowed cross streets to continue uninterrupted on the ground level of the building. The architects created a monumental facility respectful of the changing scales of the immediate neighbors, but remaining cohesive as a single complex.

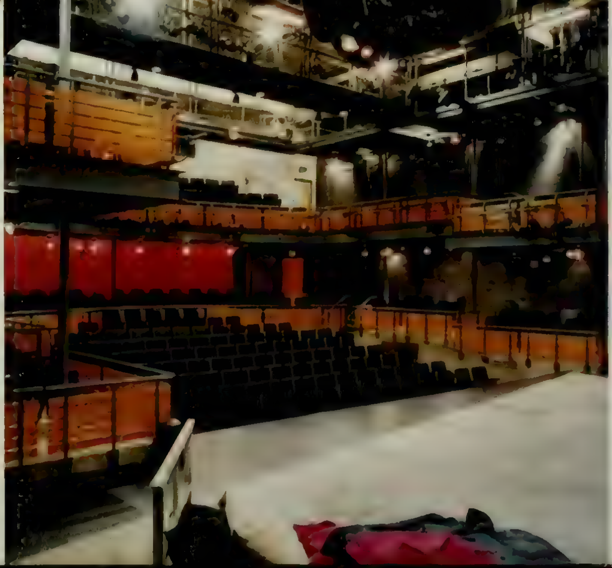


INTERIORS



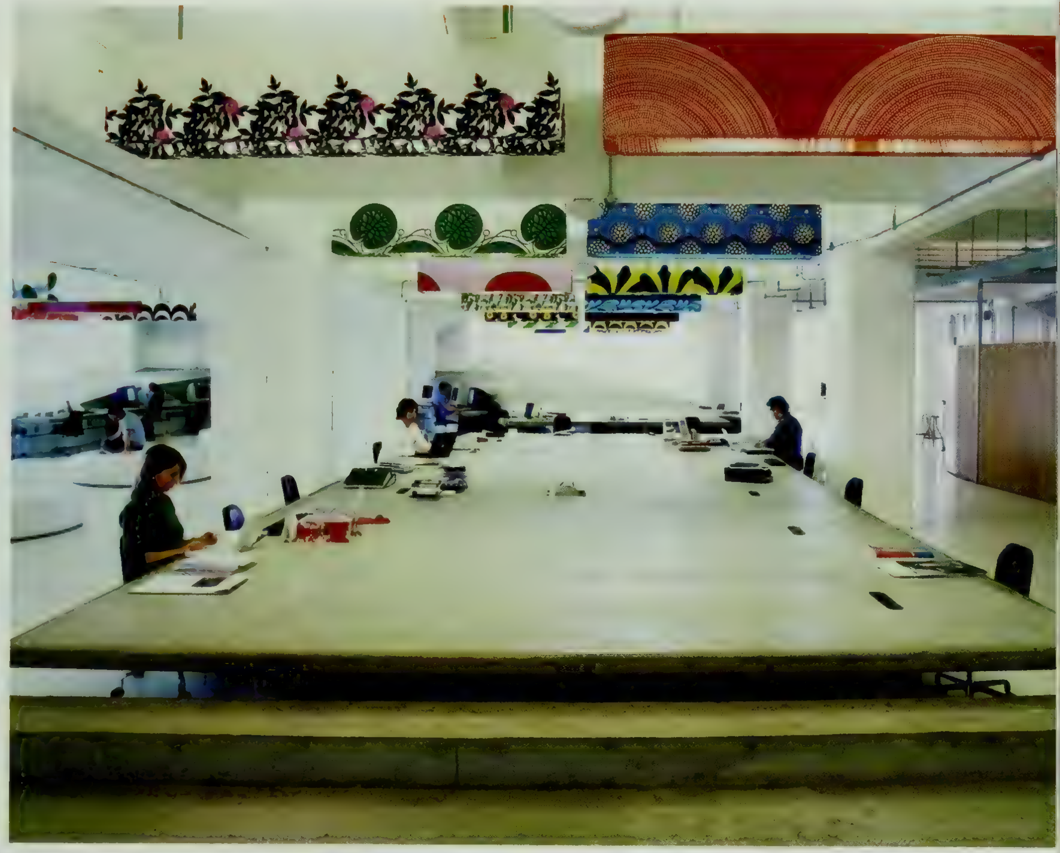
Woolly Mammoth Theatre Company
Washington, D.C.
Architect: *McInturff Architects*

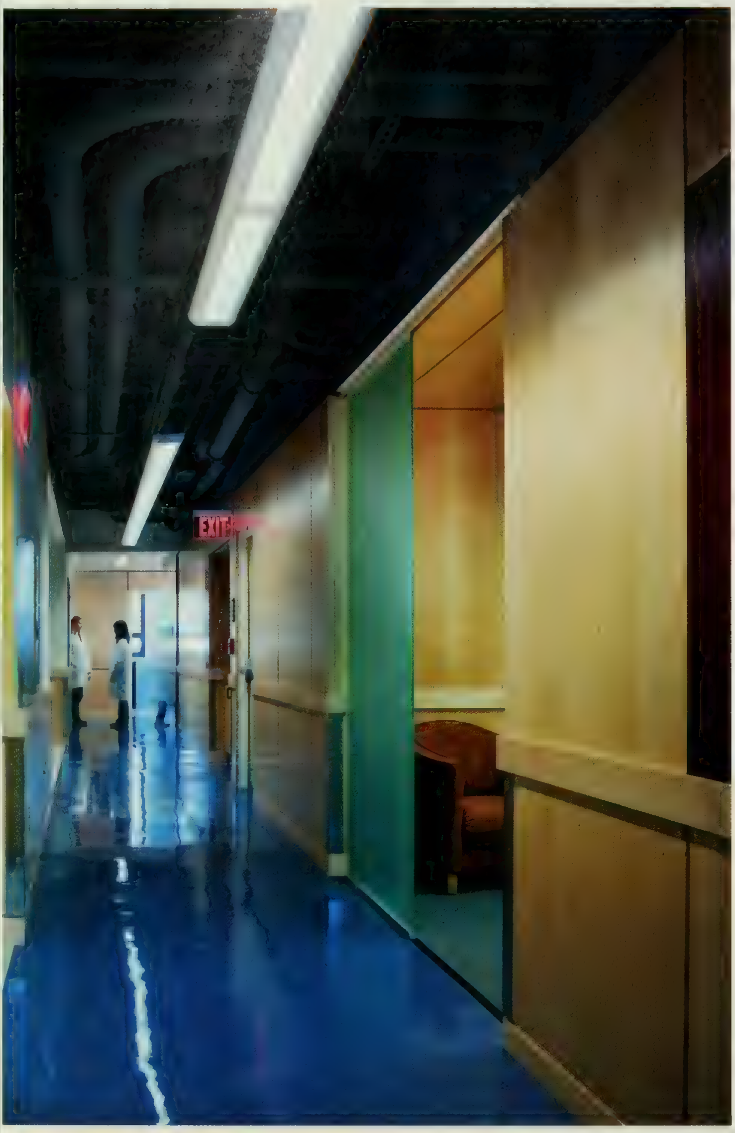
This theater company, known for controversial productions, never had a home until a publicly funded arts-developer competition offered them an opportunity. A 30,000-square-foot theater space 14 feet below grade in a 400-unit residential/commercial building was given to the company for $1 a year. The developer provided finished exterior facades and a concrete shell, leaving the designers to work with the interior on a minimal budget. The walls, stairs, and ceilings blend seamlessly into this tough shell of a space, with a rawness that is pleasant, and as edgy as the productions themselves.

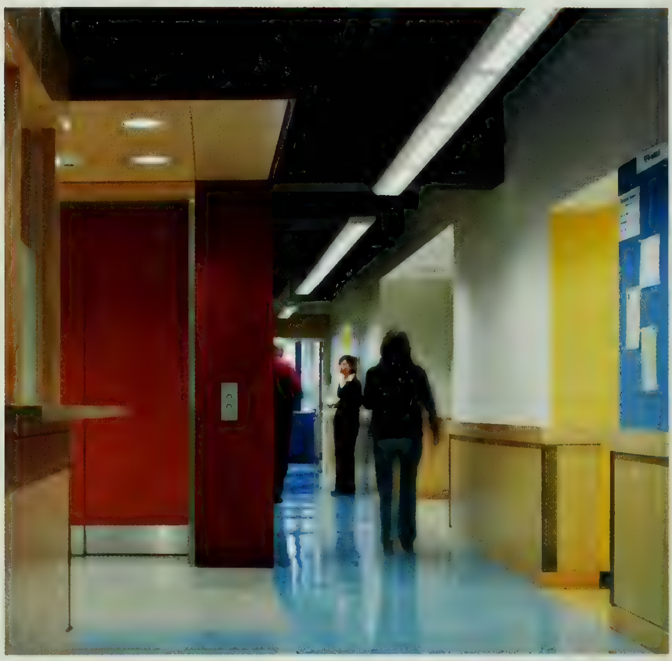


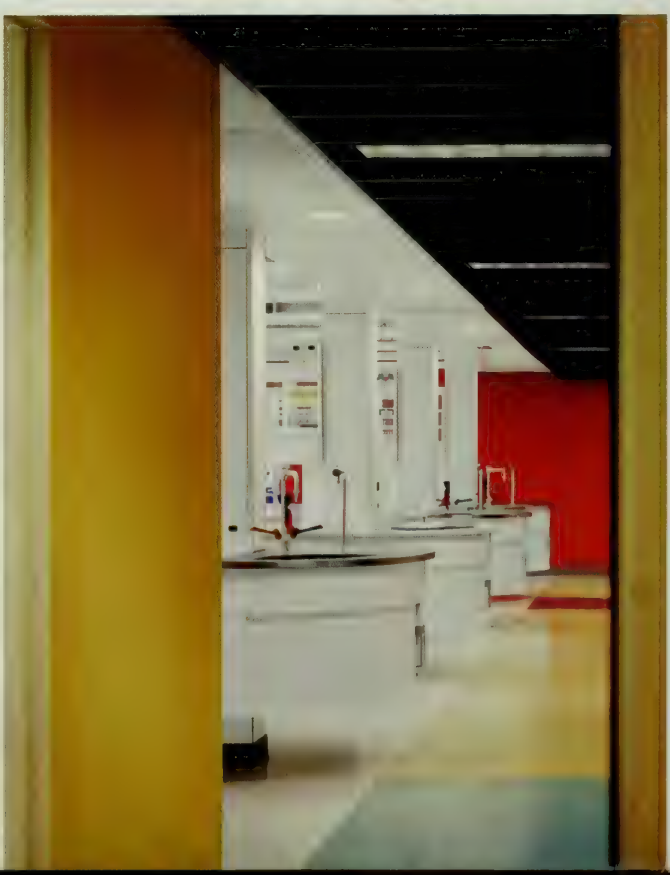
Mother London
London
Architect: *Clive Wilkinson Architects; Allford Hall Monaghan Morris Architects (architect of record)*

The client, an advertising agency, had grown from a six-person boutique firm to being the U.K.'s top ad agency. This growth necessitated a new headquarters, which they found in three floors of an existing warehouse totaling 42,000 square feet. Since the firm had grown accustomed to working collaboratively around a large table, the architects created a 250-foot-long, cast-in-place concrete table that seats up to 200 people, which also doubles as a broad extension of the central stairway cutting through the office space. Seven-foot-long lampshades, padded with acoustical foam, house 50 light fixtures covered in different patterns of Marimekko fabric, which illuminate the unique space.







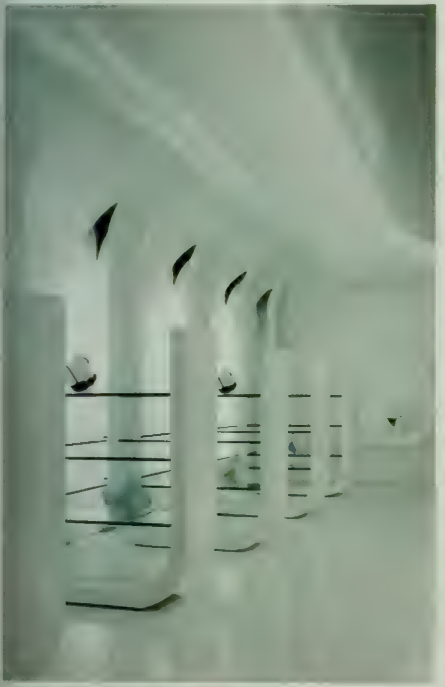


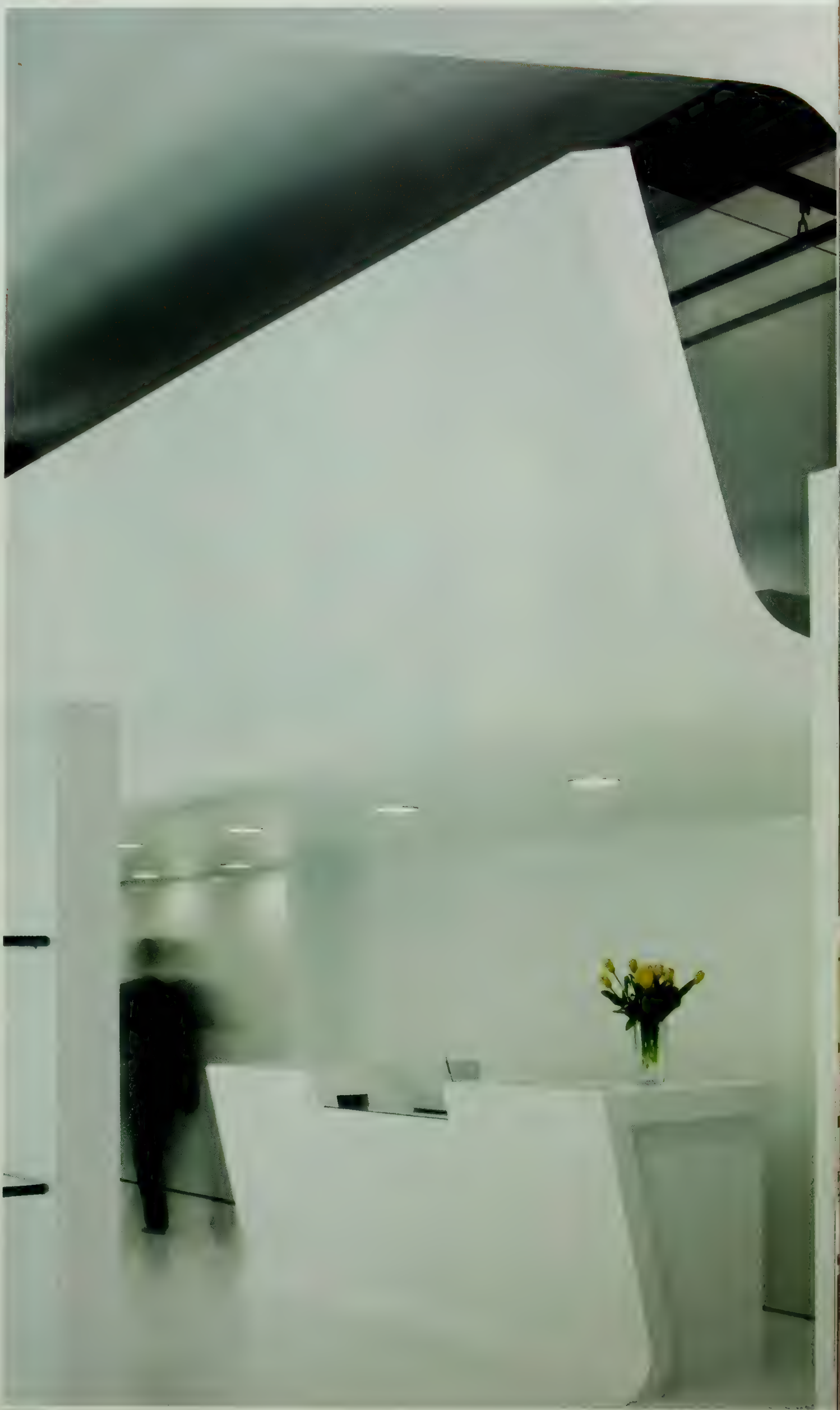
Schepens Eye Research Institute
Boston
Architect: *Payette*

A 64,000-square-foot gut renovation transformed three floors of a 1960s research building into a new research facility for this eye institute. The main lobby invites visitors in from the street with large-pane glazing and bright primary colors. The open-plan, loftlike laboratory spaces employ modular, adjustable casework systems and continue the vibrant color scheme and Modern aesthetics that define the lobby space.

Bizarre
Omaha
Architect: *Randy Brown Architects*

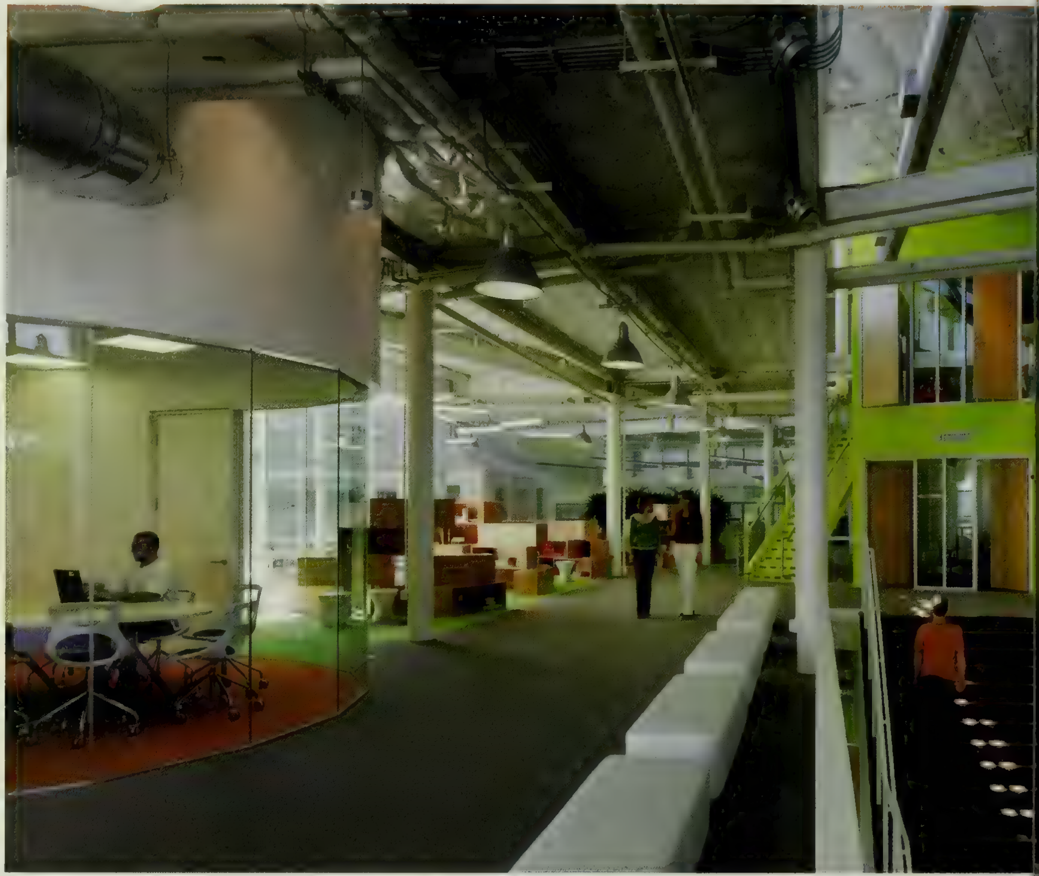
This 2,700-square-foot boutique illustrates a conceptual design focus developed from experiments with the cutting and folding of paper. Two airy and light areas resulted—one, an enclosed space that houses the checkout, restrooms, and stairs; the other, an open space where a series of pods display the merchandise.

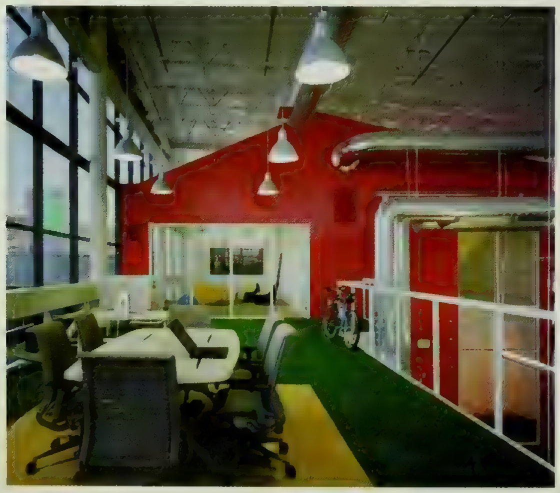


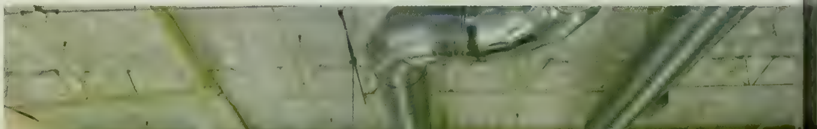


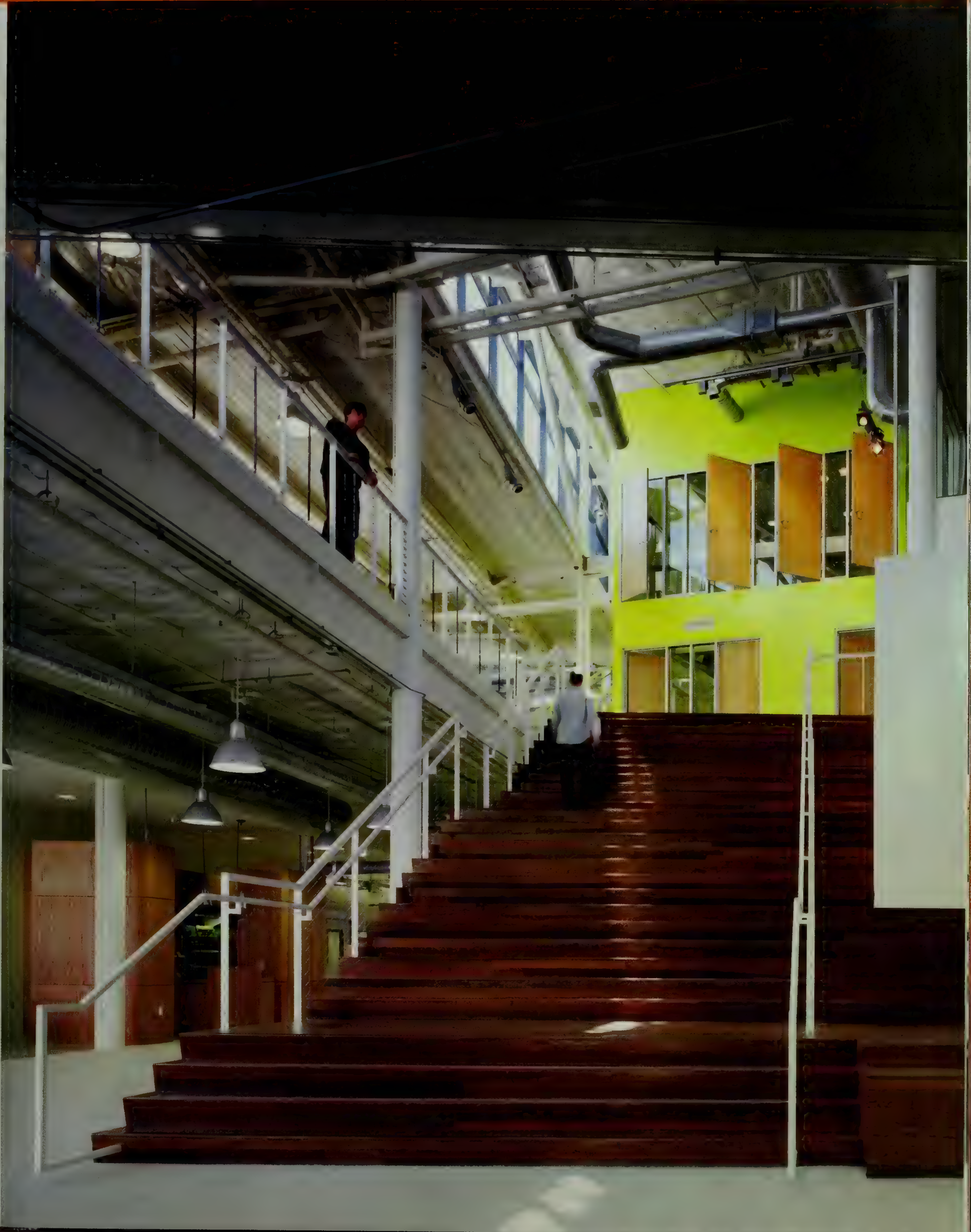
Google Headquarters-Mountain View
Mountain View, Calif.
Architect: *Clive Wilkinson Architects*

Working with a team that included workplace strategists and environmental consultants, this forward-looking company set ambiguous goals for the design of its 500,000-square-foot Silicon Valley campus. Selecting the architect in an invited design competition, the clients sought a diversified campus environment with work space, meeting rooms, recreational facilities, dining, social areas, and courtyards. Shared resource areas are located on a main corridor with groupings of secondary spaces flanking this main street. The designers sought to use green materials with a high percentage of recycled content where possible.









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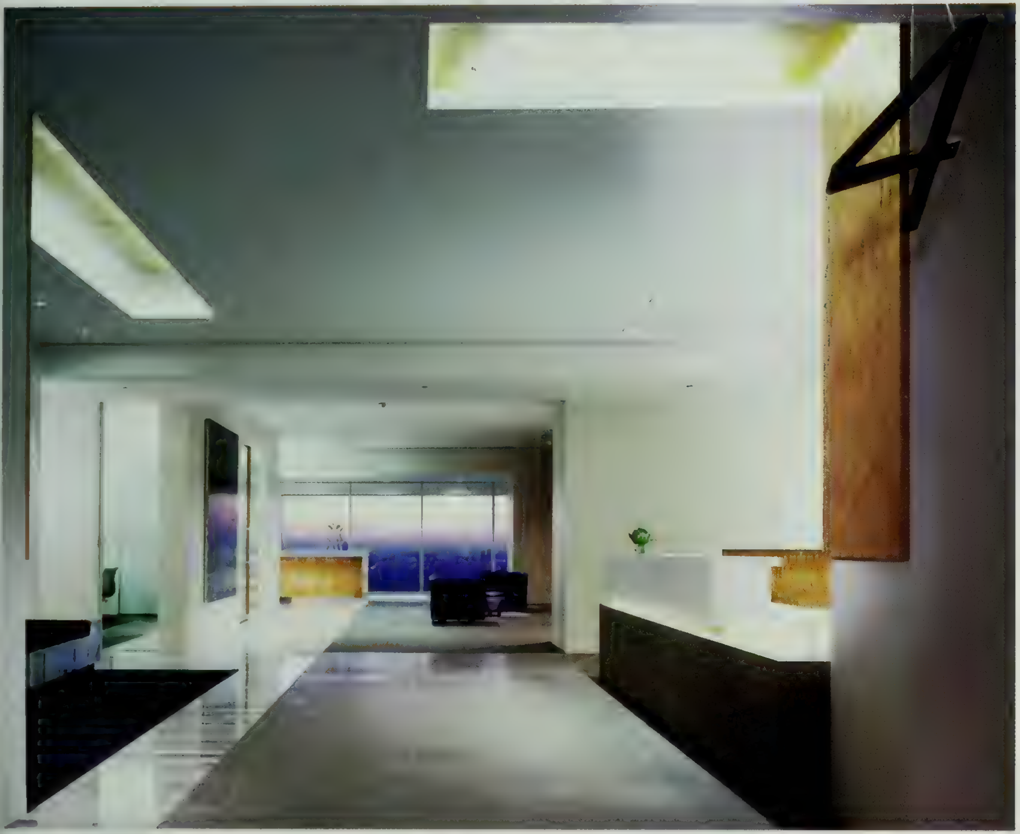
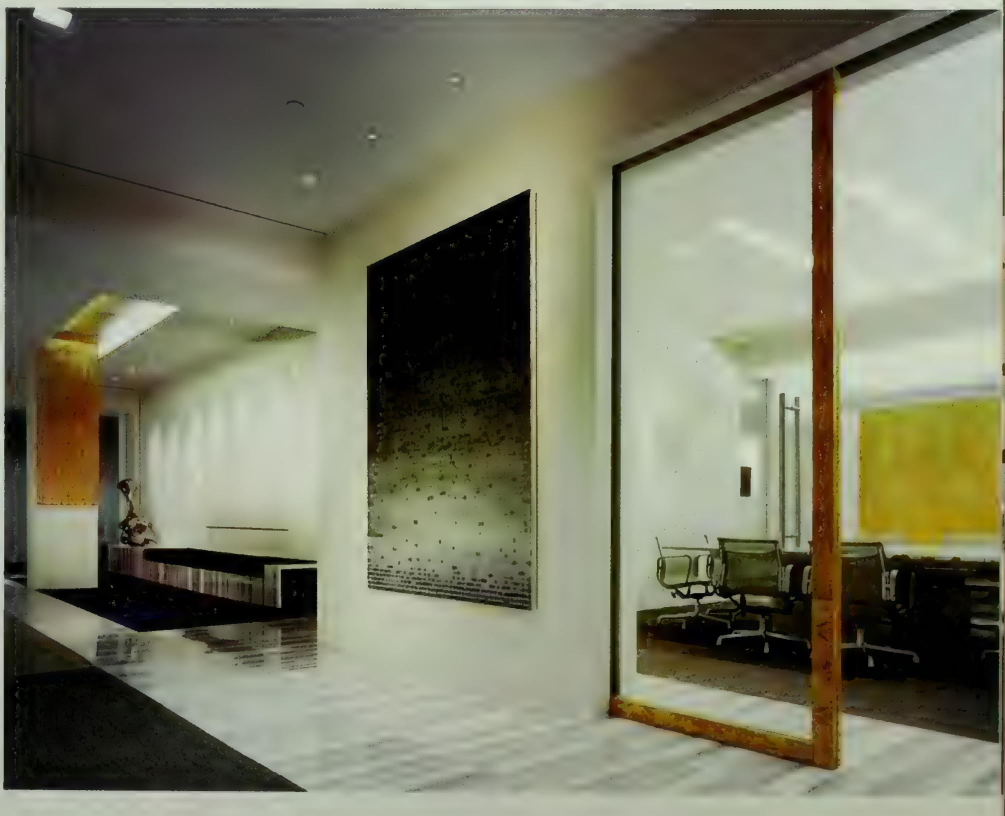


The Royal Bank of Scotland
Houston
Architect: *DMJM Rottet*

When the offices for 35 employees of the bank were restructured and divided into two separate departments totaling 12,850 square feet, the two parts needed to share conference rooms, visitor offices, reception areas, administrative areas, and a hospitality bar. The spaces were combined to reside in a 4,600-square-foot glass "box within a box" that allows impressive views out from the 65th floor of the building. The designers wove subtle hints of a Scottish tartan into benches and walls, and displayed art from local artists and galleries on the walls of the Zen-like space.



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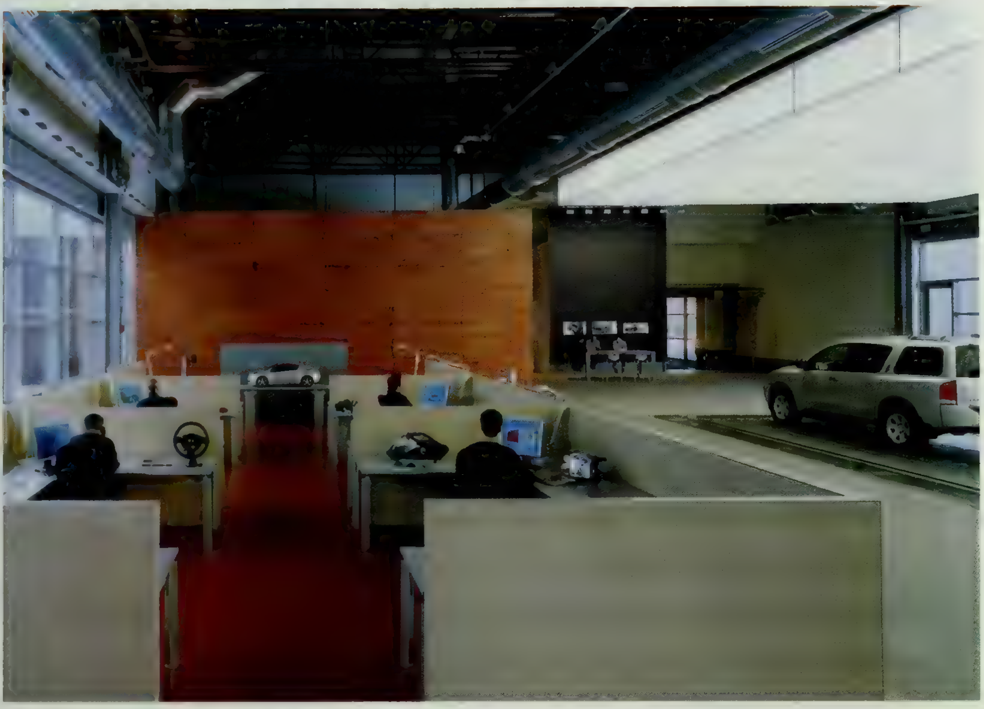
Nissan Design America
Farmington Hills Michigan
Farmington Hills, Mich.
Architect: *Luce et Studio Architects; Albert Kahn Associates (executive architect) [RECORD, December 2005, page 78]*

This new, 45,000-square-foot, state-of-the art automobile styling studio provides space for engineers and designers to conceive and design automobile prototypes in preparation for production. The building includes a public entrance area with a 20-foot-high pivoting, stainless-steel door; a modeling studio where cars are displayed; and workstations. The centerpiece of the facility is an outdoor courtyard enclosed by a stainless-steel-mesh wall called "the egg," which is for viewing the vehicles in daylight.



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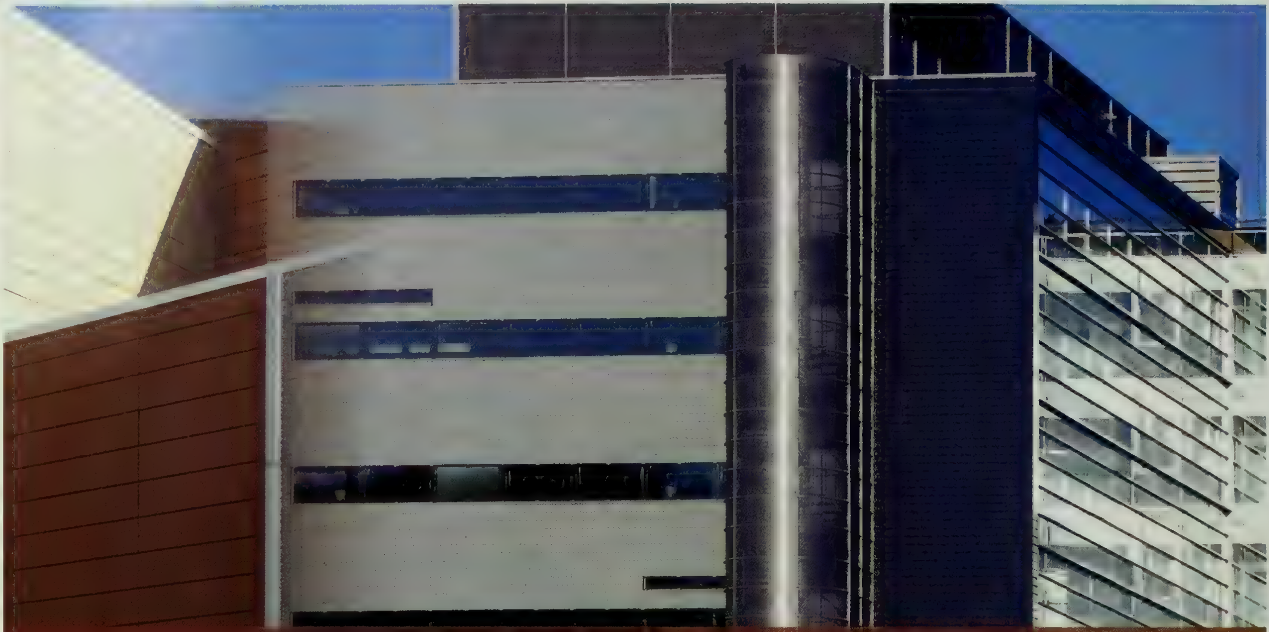

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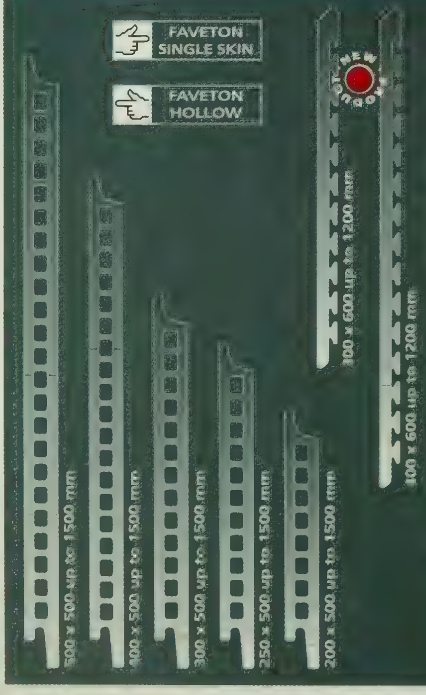

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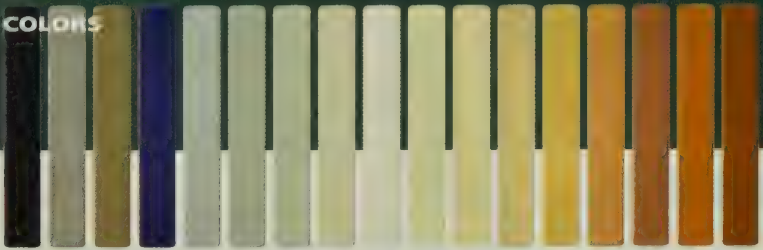

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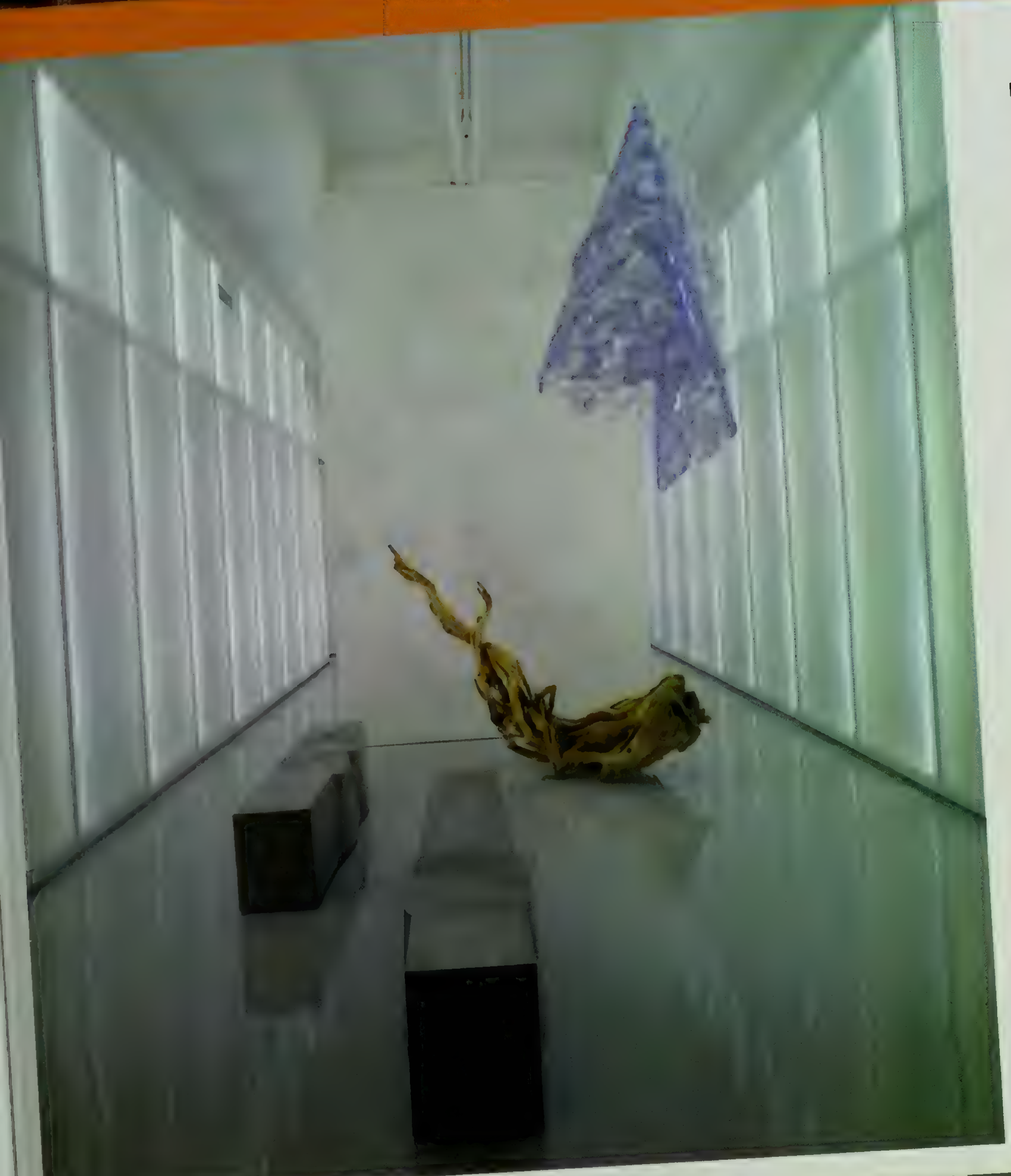
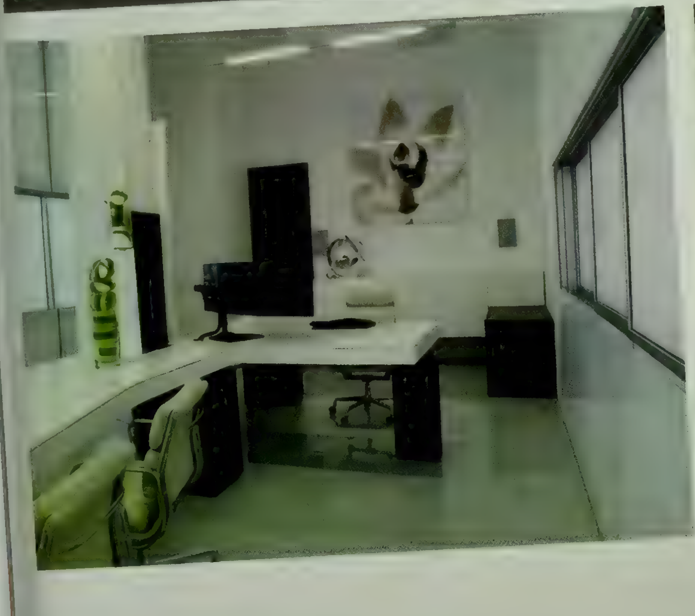


Karla
Miami, Fla.
Architect: *Rene Gonzalez Architect*

An 11,500-square-foot industrial warehouse was adapted to serve both as a space for producing large-scale floral arrangements and as a location for hosting entertainment functions. Simple and elegant materials and forms characterize this multipurpose interior, which includes spaces for reception, a production studio, installation and staging, executive offices, and food preparation. In an adjacent vacant lot made private by a Cor-Ten steel wall, flexible garden spaces were designed for outdoor entertainment events.



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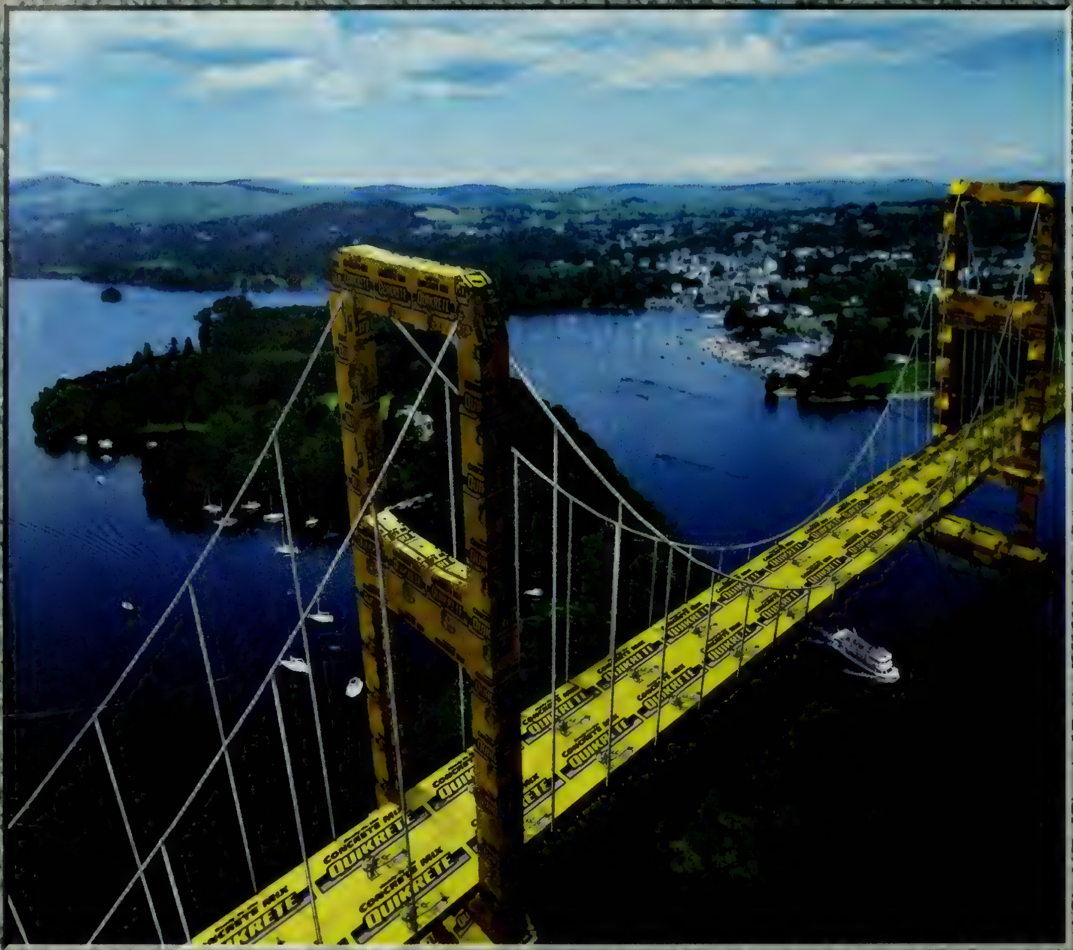
English House
Beverly Hills, Calif.
Architect: *Chu + Gooding Architects; Kay Kollar Design*

Harwell Hamilton Harris designed this 9,900-square-foot Modern classic in 1950. Abandoned, in severe disrepair, and stripped down to the drywall, the house lacked much of the original millwork and cabinetry. The architects restored and expanded the house to accommodate the new owner's growing family. Interior walls were reconfigured to accommodate a kitchen, family room, breakfast room, and a guest wing with two bedrooms and a bath. A master bedroom suite with sitting and dressing rooms was designed in the existing bedroom wing. Although most of the original detailing had been removed, the architects reinterpreted these elements, bringing life back into the house in the spirit of Harris's original design.



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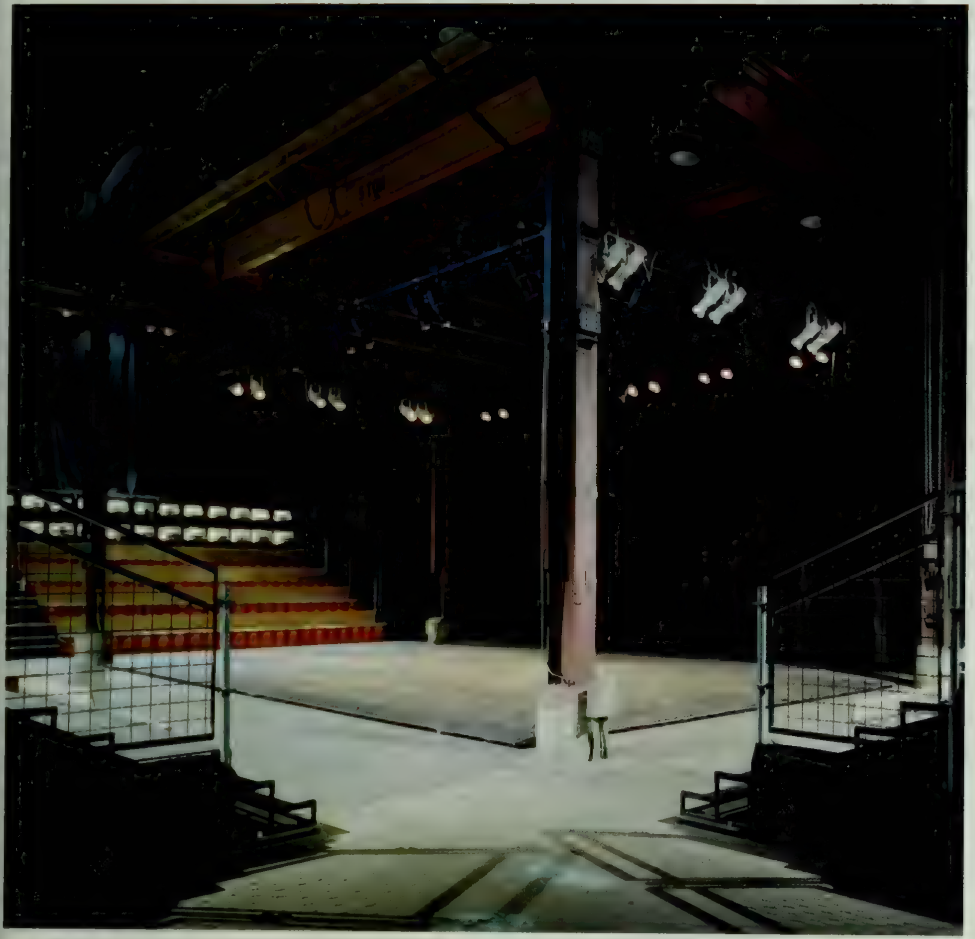

Temporary Theater

Portland, Ore.

Architect: *BOORA Architects*

A nonprofit owner that sponsors an annual international arts festival required a temporary 200-seat theater on a budget of $10,000. Using recycled, recyclable, recovered, and resalable materials in the design, the architects (who worked pro bono) inserted a 7,000-square-foot theater into an empty, 25,000-square-foot warehouse. A wall of scaffolding conceals the backstage equipment and separates the theater from the rest of the building. Existing offices were turned into back-of-house support spaces, and a large open space in the warehouse served as a cabaret, bar, and café for theatergoers.

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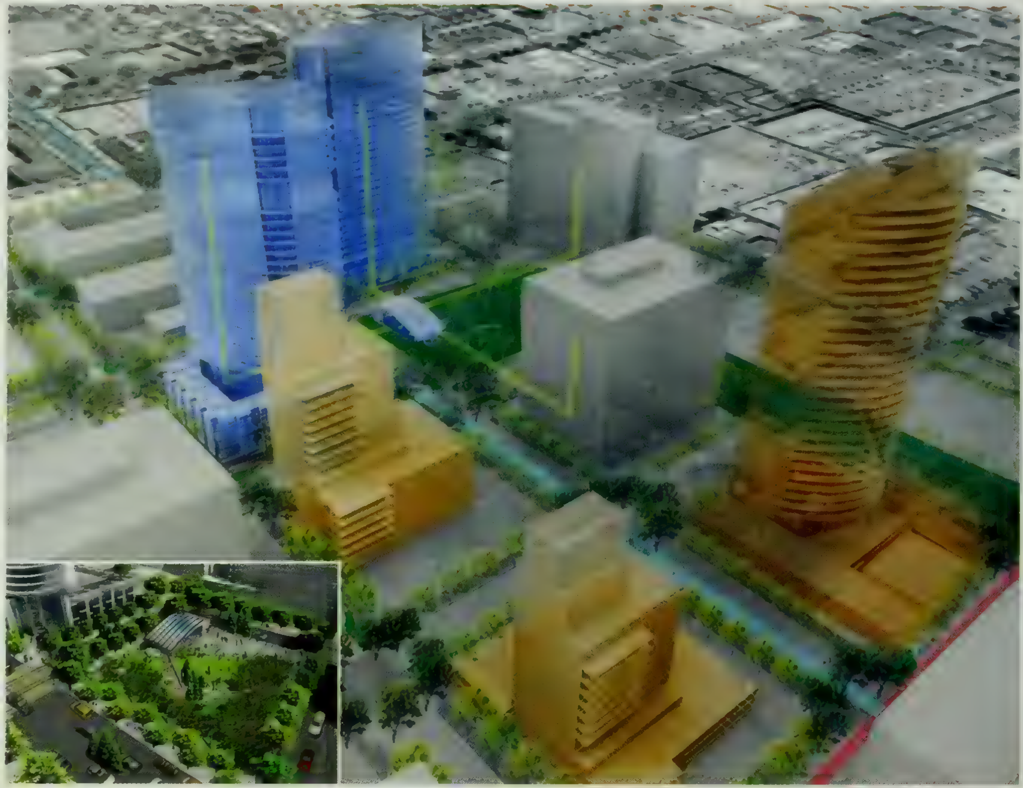
Skillman Library
Easton, Penn.
Architect: *Ann Beha Architects*

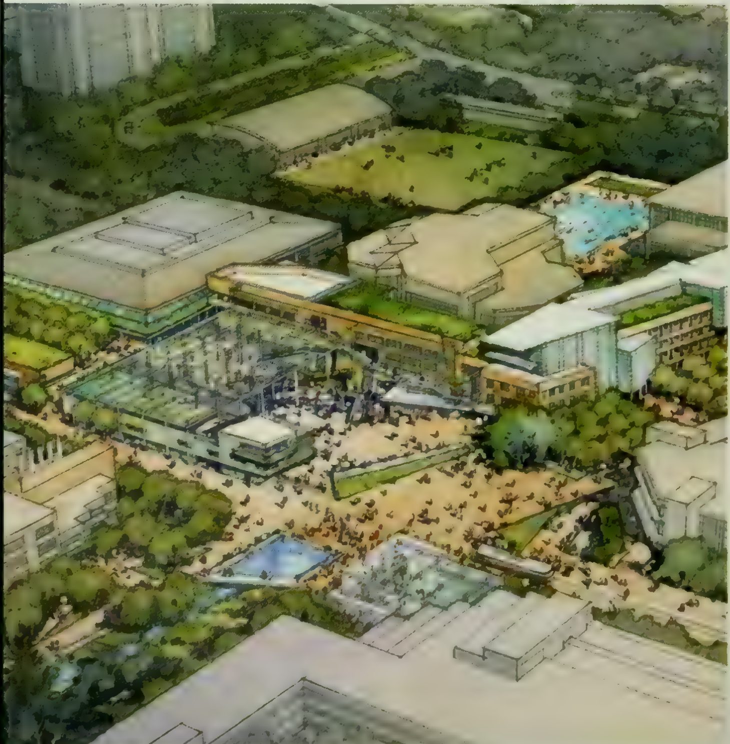
The Lafayette College campus 1964 library building had served merely as book storage. Renovation of this 75,000-square-foot facility and 30,000 square feet of additions to it resulted in a contemporary, light-filled, and welcoming learning center. Such natural materials as cork and stained concrete were used for flooring. Furnishings include industrial materials such as aluminum and brushed stainless steel, while cherry wood was used for tabletops and case work. The additions are scaled to reflect the proportions of the surrounding buildings, knitting the campus together .

URBAN DESIGN

Lloyd Crossing Sustainable Urban Design Plan
Portland, Ore.
Architect: *Mithun*

With this 35-block, mixed-use neighborhood plan, the designers sought to prove that negative environmental impacts can be reduced, even as an area becomes more populated. The architects focused on three environmental concerns—water conservation, green space, and renewable energy. The plan specifies that storm and wastewater will be collected for treatment on-site, reducing the need for imported water. Preserving the parks and woods will create a luscious tree canopy to mimic the predevelopment air quality. Using solar- and wind-power energy systems will increase renewable energy sources. All buildings constructed in the neighborhood will aim for LEED Silver certification.





University Square, University of British Columbia
Vancouver, B.C., Canada
Architect: *Moore Ruble Yudell Architects & Planners*

On a site consisting of five development parcels, open spaces, and 415,000-square-feet of buildings, this year's Firm of the Year (see page 202) designed buildings, water systems, and a landscape plan for the University of British Columbia. Two new buildings, positioned over an underground transit station, will help define the open space. An "eco-stream" linked to a fountain will collect and purify water. Paths, courtyards, and roof gardens will offer ample outdoor space for students living in the dormitories. A landscaped promenade, stretching beneath a canopy of elms, offers daytime diversion, while the new, 24/7 atrium for cultural, academic, and social activity will provide opportunities for nighttime social interaction.

When the new San Francisco-Oakland Bay Bridge opens in 2012, it will have to do more than merely support traffic. To comply with a new state program, it also has to resist earthquake damage.

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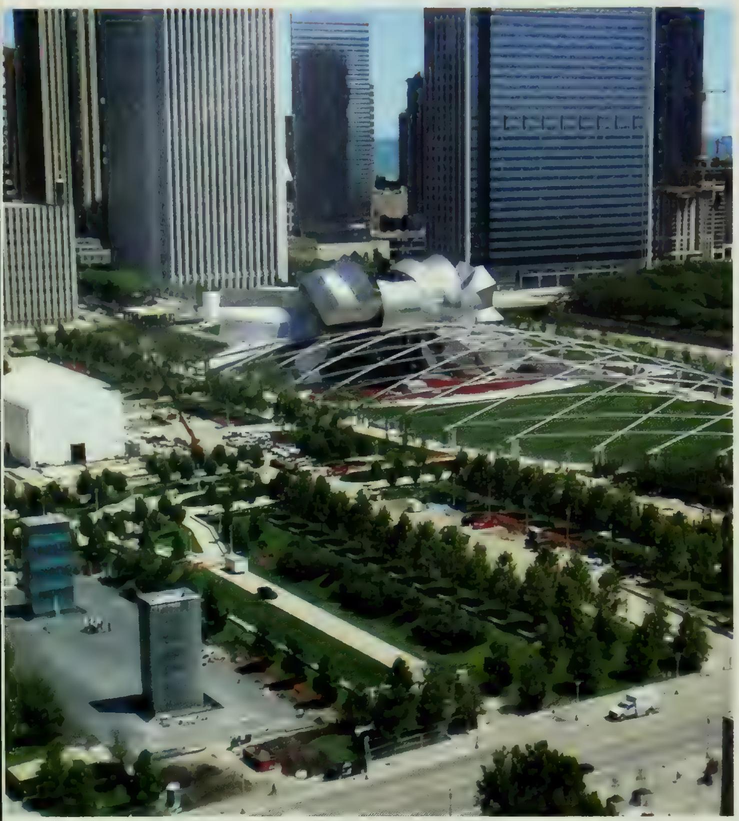
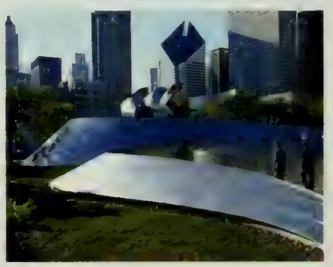
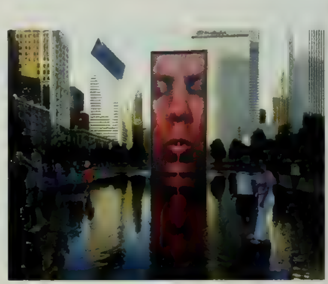


Millennium Park
Chicago
Architect: *Skidmore, Owings & Merrill (master architect and planner); Gehry Partners; Gustafson Guthrie Nichol; Hammond Beeby Rupert Ainge; Harley Ellis Devereaux; Krueck & Sexton Architects; McDonough Associates; Muller & Muller Architects; OWP/P; Renzo Piano Building Workshop; Teng & Associates*

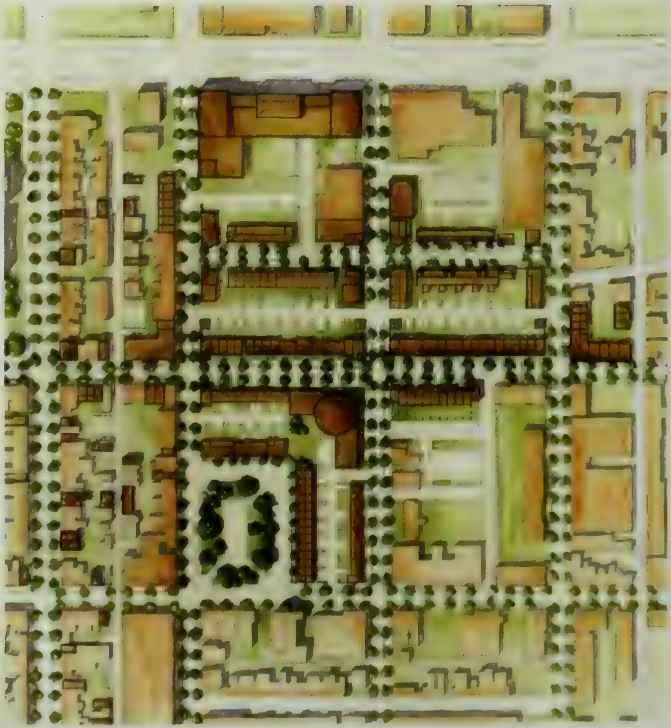
The redevelopment of the Millennium Park transforms an eyesore into a showplace for art, music, architecture, and outdoor activities. Sited in the heart of Chicago, it represents the fruition of a 100-year effort. The 16.5-acre project includes the work of Frank Gehry, who designed the Pritzker Pavilion, and Renzo Piano, who conceived two south pavilions now under construction. The project aimed high for public art with Spanish artist Juame Plensa's spitting fountain and Anish Kapoor's reflective kidney-bean-shaped sculpture. The Great Lawn stretches across the park to the north, and the Lurie Garden occupies 2.5 acres on the southeast side, with Gehry's undulating bridge as the main eastern entry point.





Martin Luther King Plaza Revitalization
Philadelphia
Architect: *Torti Gallas & Partners*

Decades of disinvestment and disrepair plunged the Hawthorne neighborhood, south of downtown Philadelphia, into poverty. Fortunately, by the fall of this year, carefully balanced urban-renewal efforts should reinvigorate the area. This 5-acre scheme involves replacing a public-housing high-rise with a mixed-income, mixed-use neighborhood. Extensive renovation and infill in the surrounding community will extend streets of row houses, live/work units, and mixed-use apartment units. Three-hundred-thirty units of housing, a community center, and a park all contribute to propelling the community back to health.



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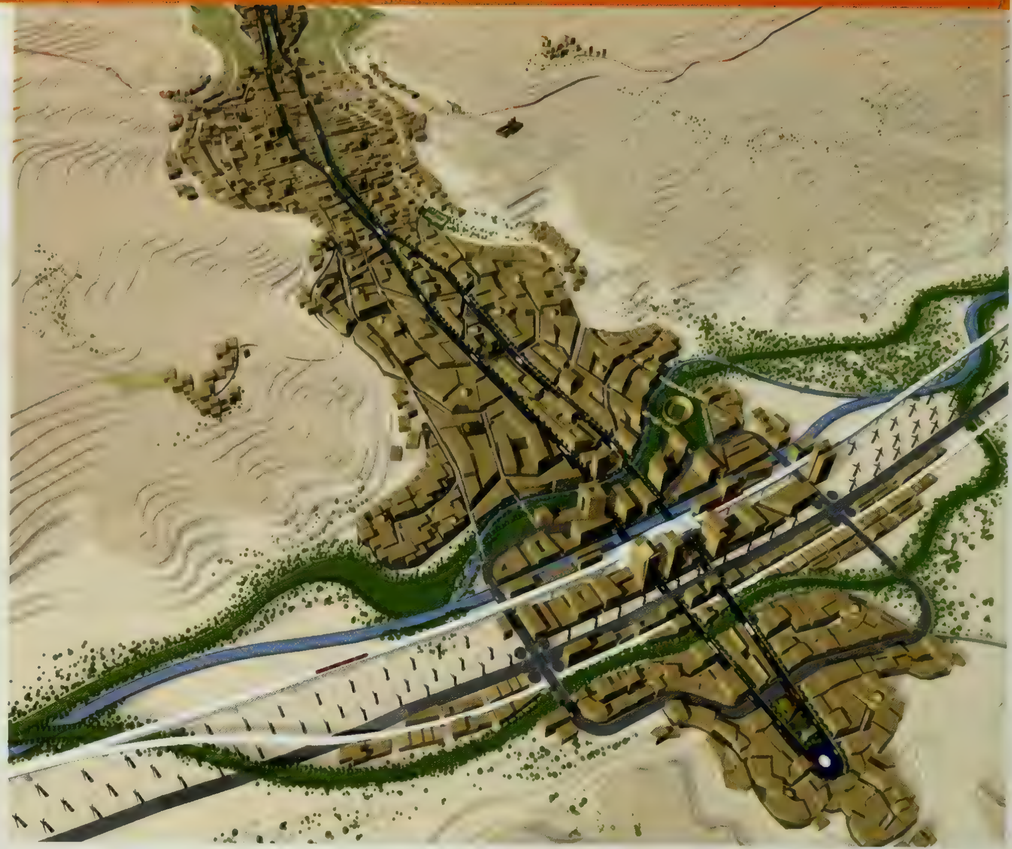
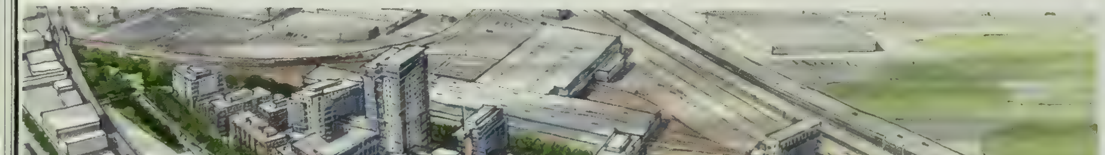
The Arc: A Formal Structure for a Palestinian State

West Bank and Gaza, Palestine
Architect: *Suisman Urban Design*

This ambitious proposal, linking Gaza and the West Bank (approximately 154 miles long and 72 miles wide) could eventually support 2 million new residents at a density of 30,000 people per square mile. The project, expected to be completed in 2016, envisions railways, rail stations, transit boulevards, toll roads, and 100,000 units of housing. The plan will be crucial for the success of an independent Palestinian state, which must address waves of returning refugees and rapid neighborhood development while protecting its open spaces.





North Point

Cambridge, Boston, and Somerville, Mass.
Architect: *CBT/Childs Bertman Tseckares; Greenberg Consultants (associate architect)*

By converting a 42-acre former railroad yard into a mixed-use community, this scheme will introduce 2,700 residential units, 2.2 million square feet of office space, and 150,000 square feet of retail space to three municipalities. The project's environmental goals are foregrounded by its close proximity to mass transit stations (MTBA), an extension of the Minutemen bike trail, 10 acres of green space, and improved pedestrian walkways. The main entry into the site is currently a busy intersection, which will be reorganized for pedestrian access and the addition of a new Green Line Train Station nearby.

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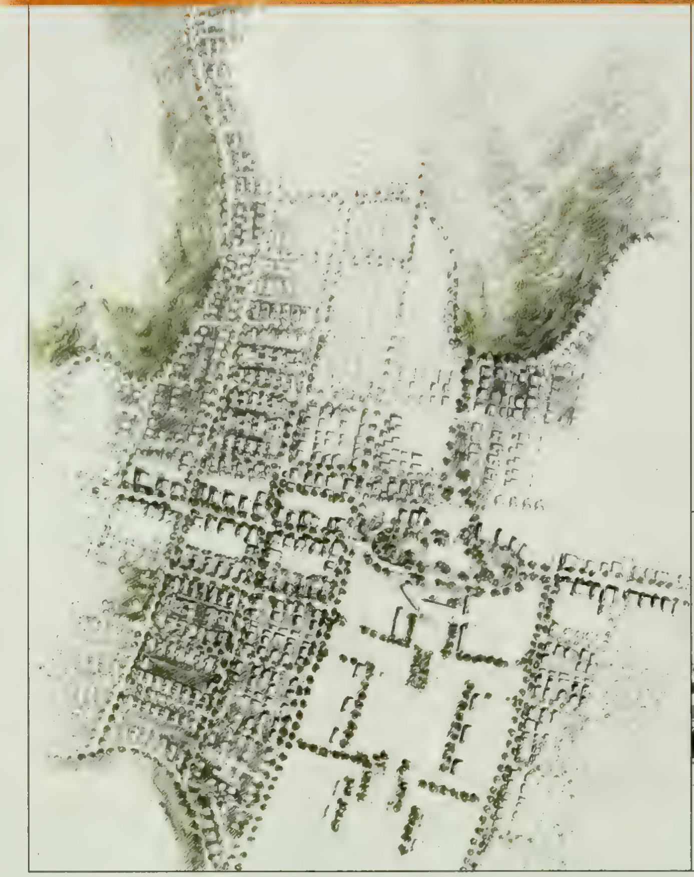
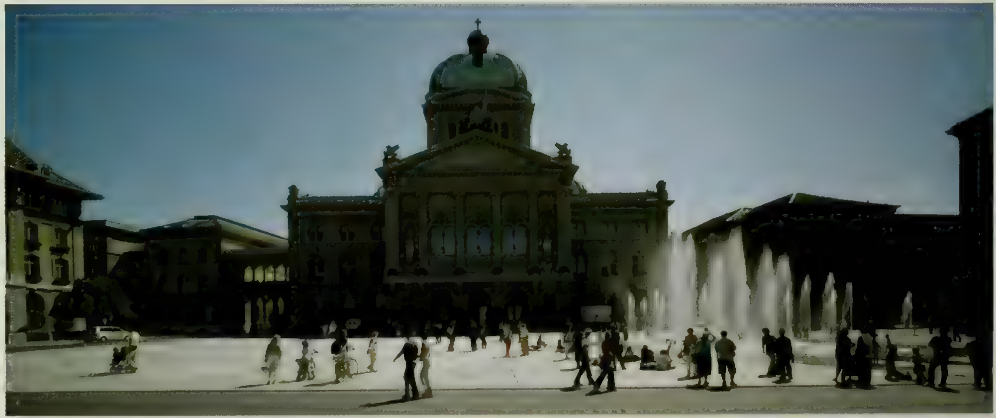


Chippewa/Cree Reservation Plan
Box Elder, Mont.
Architect: *Ferdinand S. Johns, AIA, with Allison Orr; Community Design Center (associate architect)*

Tribal elders helped strategize the development of this 130,000-acre, Native American–owned property, an abandoned military reservation, whose residents have experienced financial strain in the recent past. Since the population of the tribe is expected to grow from 3,000 to 19,000 by 2050, long-term growth with a focus on sustainability propelled the planning. Five alternative scenarios based on community input, physical environment, and economic parameters were proposed. Incorporating feedback from the tribal community, a direction emerged that was the result of combining elements from all five plans.

Swiss Government Plaza
Bern, Switzerland
Architect: *Lee & Mundwiler Architects; Stauffenegger & Stutz Visual Design (associate architect)*

When automobiles hit the city of Bern (which, incidentally, did not have a tradition of protecting open space), a former plaza in the center of town became a parking lot. The task of bringing a plaza back to this site, which is adjacent to the historically significant capitol building and other Neoclassical structures, took more than half a century. To create the 100,000-square-foot "Bundesplatz," the designers cut off vehicular access, created curbs, arranged stone in symmetrical patterns, and reintroduced a fountain with 26 water jets in the exact location where one had been removed long ago.



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25 YEAR AWARD

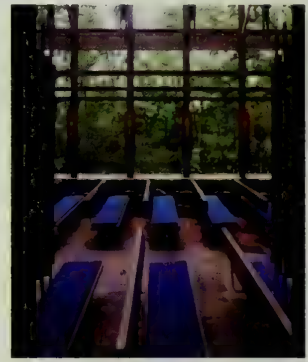
Thorncrown Chapel still beckons

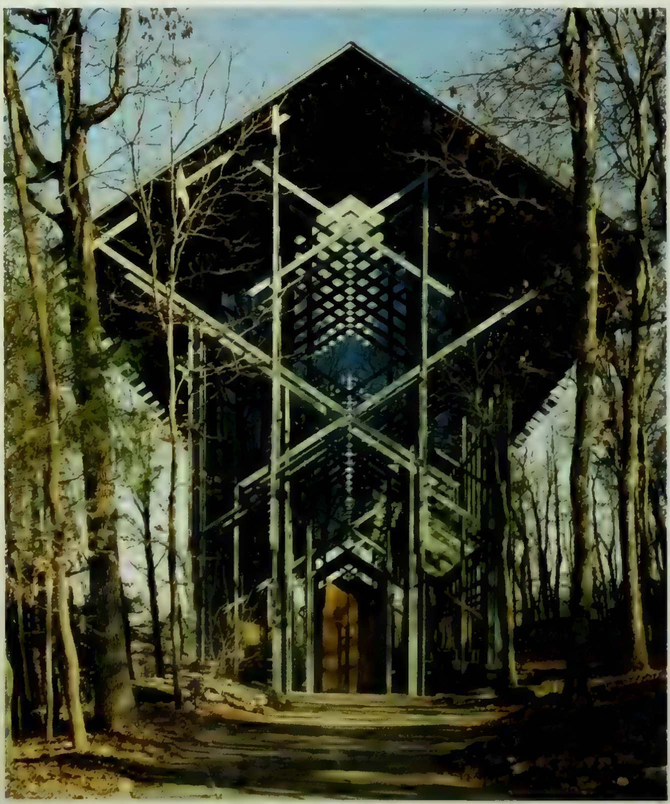
Thorncrown Chapel [RECORD, March 1981, page 88], the diminutive masterpiece built in 1980 by the late AIA 1990 Gold Medalist E. Fay Jones, FAIA, shows how severe constraints can provoke greatness. Built on a miniscule budget of $180,000 in woodland beside an active highway near Eureka Springs, Arkansas, this tiny (24 feet wide, 60 feet deep, 48 feet tall) structure has beckoned legions of visitors with irresistible force.

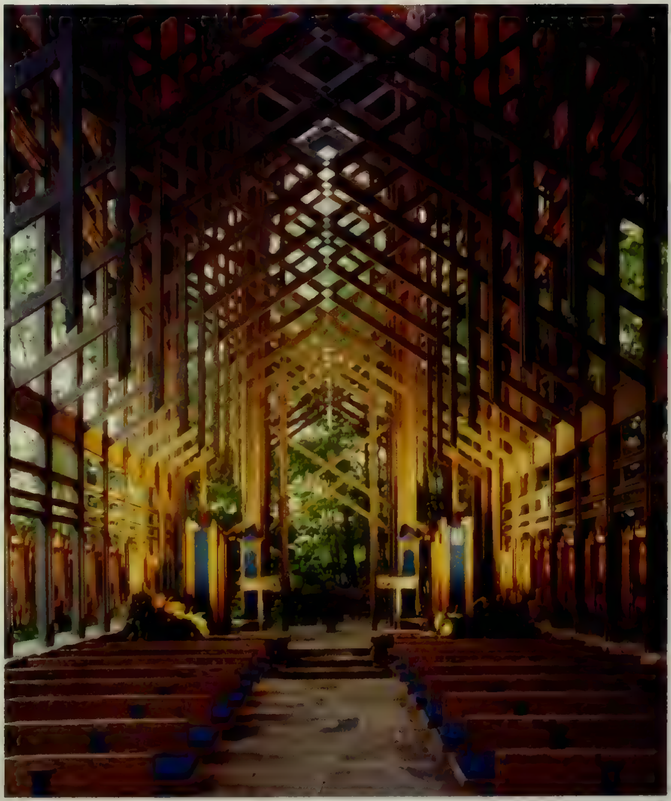
Constructed of southern pine two-by-fours, two-by sixes, and two-by-twelves, the simple, gabled shed rises from a stone base into the tree canopy. Early in the design process, the architect determined that no trees should be cut; trusses, assembled in situ, were simply lifted into place. From the interior, the visitor is both bound within nature and set apart. While the architect mentioned the influence of the Gothic Sainte Chapelle, in Paris, the Wrightian influence on Jones's work seems clear, with a nod to Bernard Maybeck and the Japanese tradition. Jones's own hand produced a distinct essay in organic architecture that emphasizes clarity of structure while concurrently achieving a sense of the infinite through repetition and detail. Particularly noteworthy is the steel oculus that links high cross-braced members, substituting void for mass, light for substance.

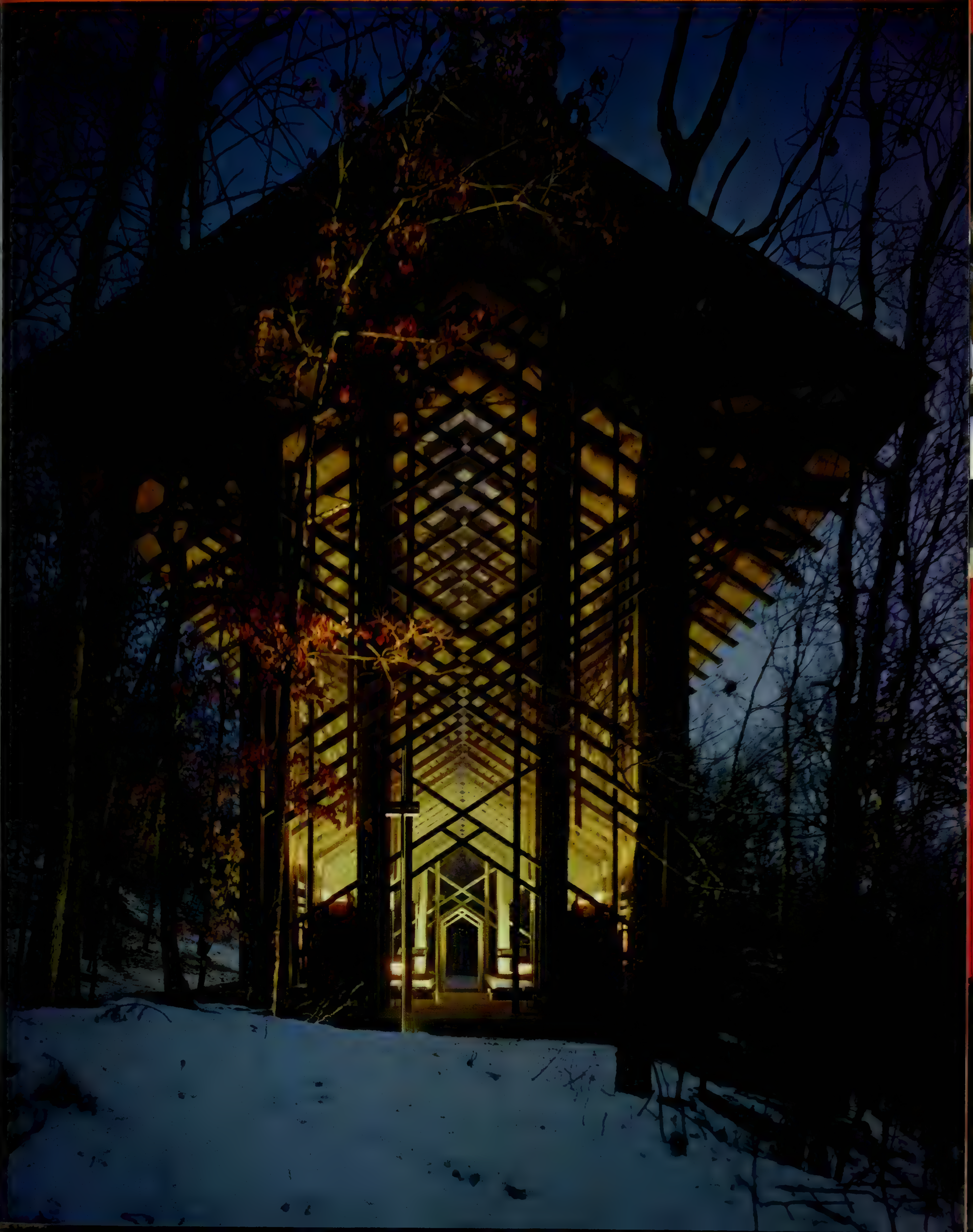
The tiny building with a single room has brought Jones international recognition. The 1981 AIA Honor Award jury singled out Thorncrown, as did *Newsweek*, which called it "metaphysical." In 2000, members of the American Institute of Architects voted the chapel one of the top 10 buildings of the 20th century. So successful in attracting weddings and worship services was the entire site that in 1989 the owner commissioned a second Jones structure down the hillside, the Thorncrown Worship Center, to accommodate larger crowds.

In accepting the award during ceremonies at the 2006 Accent on Architecture event, Jones's widow, nicknamed Gus, recalled her husband's modest exclamation on returning from the beautiful natural setting of the future chapel: "Gus," he said, "I just hope that I don't mess it up." *Robert Ivy, FAIA*









FIRM AWARD

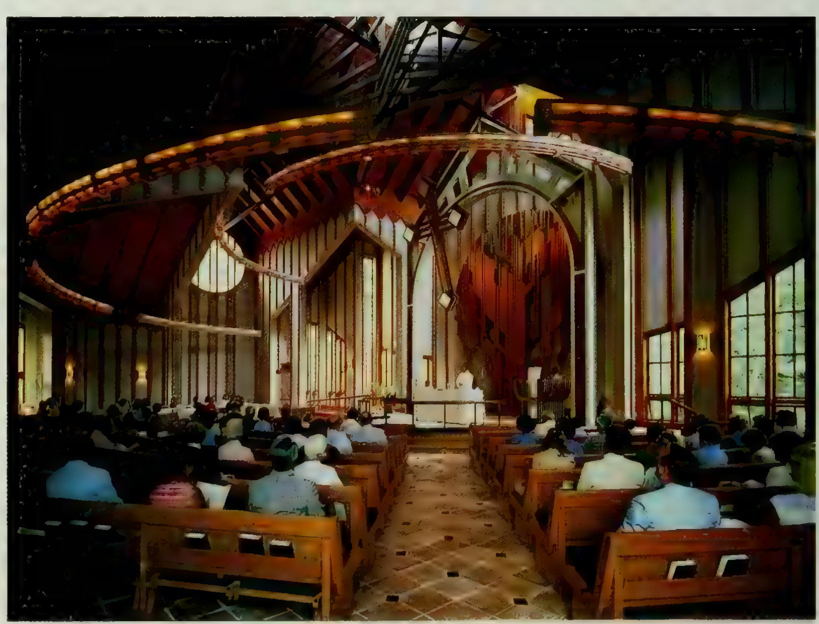
Moore Ruble Yudell enlightens a vast body of work with social values and sustainability

According to Charles Moore's biological clock, he needed to start a new firm every 10 years. But he kept ties all across the country, and the different practices became an 'extended family,'" recalls Buzz Yudell, FAIA, a founding partner of Moore Ruble Yudell Architects & Planners (MRY), recipient of the 2006 AIA Firm Award. "Charles always liked launching small practices with protégés, often partnering with his former students," adds John Ruble, FAIA, "but when the offices got big, he moved on."

Before joining Moore to found MRY in Los Angeles in 1977, Yudell and Ruble studied under him: Yudell at Yale, while Moore was its dean of architecture (1965–70), and Ruble at UCLA, where Moore headed the architecture and urban design programs in the late '70s. Although MRY began modestly, designing a private Los Angeles home—Rodes House [RECORD, mid-May 1981, page 126]—larger commissions soon followed, establishing the firm's talent for juggling an impressive variety of building types, programs, and venues.

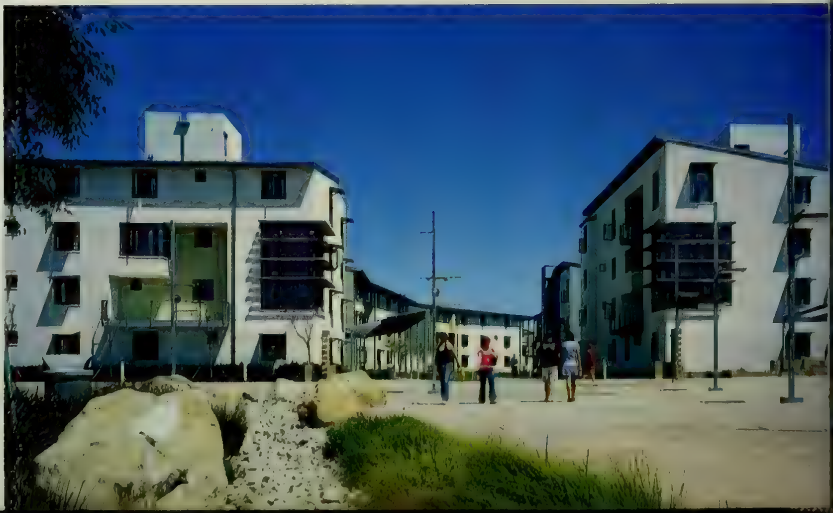
In 1979, the team began designing St. Matthew's Episcopal Church, in Pacific Palisades, California—the first of MRY's many cultural, religious, and institutional projects—and in 1980 won a design competition for Berlin's Tegel Harbor Housing. This commission propelled the firm into an international arena, taking it from a six- to a 15-person practice, now up to 60 (a trend that perhaps prompted Moore's flight, in 1985, to Texas, where he started a small firm while remaining an MRY partner until his death, in 1993).

Though Moore's work had been known for its bold colors, supergraphics, and mix of historical and pop references, MRY as a team has tended toward a subtler, more contextual, even vernacular sensibility. The practice's strong ongoing themes—centering on sustainability, affordable housing, and community involvement—emerged early on. Such concerns can be traced to the 1960s and '70s, when Moore began

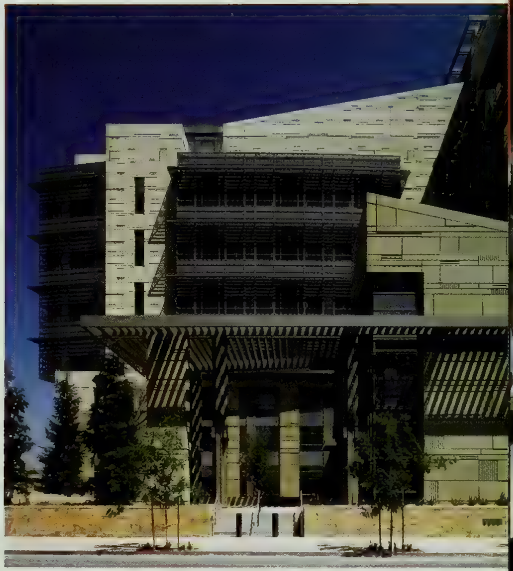


St. Matthew's Episcopal Church, Pacific Palisades, California, 1983.

Manzanita Village Housing, University of California, Santa Barbara, 2002.



Yudell/Beebe House, Sea Ranch, California, 2001.



U.S. Courthouse, Fresno, California, 2005 (below and above right).

actively encouraging students to take on social issues.

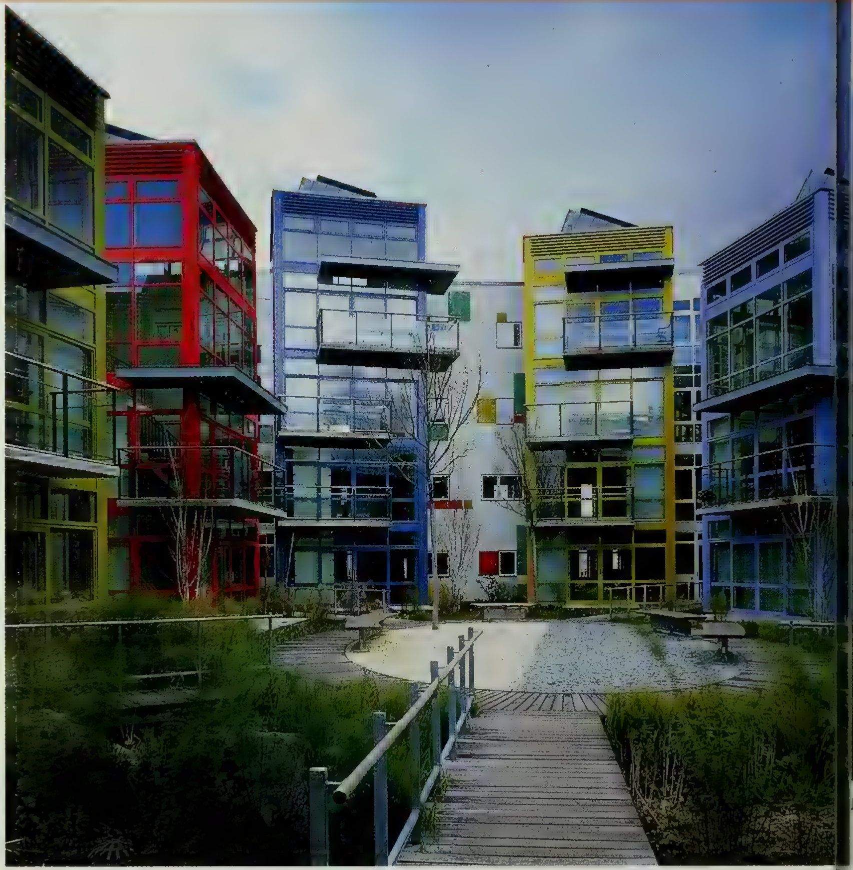
With St. Matthew's Church, MRY first applied Jim Burns's and Lawrence Halprin's "Take-Part" planning process. The idea was to engage the community in workshops or charrettes, getting all relevant parties (including a project's future users) to help shape the key ideas, rather than positioning architects opposite "client/critics." Though this approach is common now, Yudell says, "people were skeptical of it then, suggesting that architects were either pandering to the community or abdicating their responsibility to it." But at St. Matthew's, he adds, "many congregants said, in the end, the process had helped heal the wounds of a divided parish." Although the partners do not consider this method suitable for every project, they continue to find it valuable. "That way, you get to see the contradictions early on," observes Ruble. "Nothing is held back."

Other lessons came to MRY from Ruble's days, at the outset of his career, as a Peace Corps architect and planner in Tunisia. There, he saw economically, culturally, and environmentally attuned responses to energy conservation—and, he says, really began to understand the importance of place in design.

Those values are particularly apparent in such projects as Tango housing, which MRY built in partnership with SWECO FFNS Arkitekter AB for the 2001 housing exposition in Malmö, Sweden. Tango's forms subtly evoke the country's Modernist traditions, while the brilliant hues (fine-tuned by MRY's color expert Tina Beebe) allude to Swedish fishing villages. Rooftop photovoltaic panels, surrounded by insulating grasses, convert solar energy into heat, while the self-sufficient project's wind turbine plant generates electricity. Each apartment, unique in its design, has its own "intelligent wall" system, controlling everything from room temperatures to door locks. And a community garden, lush with marsh vegetation, forms the heart of the complex.

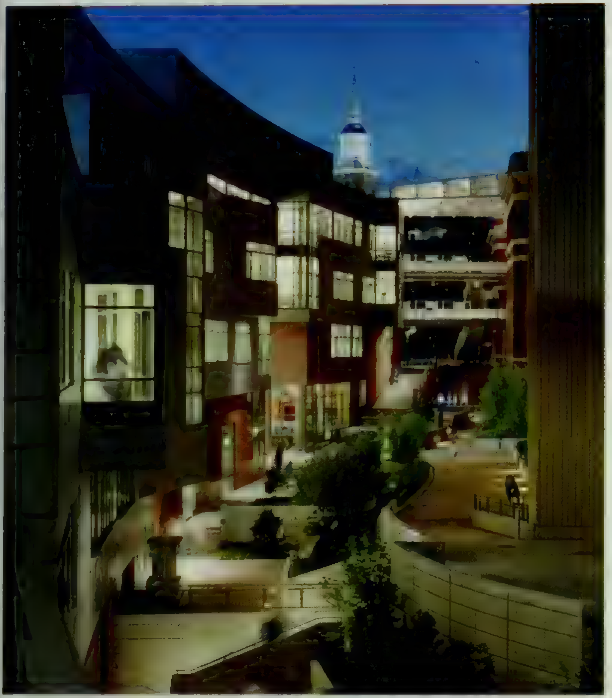
Through public and private housing in Europe, Australia, Asia, and the United States, the firm continues to investigate sustainability, density, urban infill, affordability, and income integration. Still building single-family homes, MRY aspires to translate a sense of intimacy and individuality into the multifamily work. While planning entire towns and urban sectors, the firm has also tackled educational projects ranging from elementary schools to campus planning and university buildings for performing arts, sciences, and business studies. MRY's federal structures have included a 2004 courthouse in Fresno, California, and an embassy, under construction in Berlin. As Ruble says, "We'll take on virtually every building type but hospitals and airports."

Twenty-nine years after its founding, the practice has grown exponentially, with many award-winning projects to its credit. True to the firm's original ideals, the partners still aspire to the spirit of collaboration—within MRY and beyond. *Sarah Amelar*



Tango, Bo01 Housing Exposition, Malmö, Sweden, 2001.

Glorya Kaufman Hall, UCLA, Los Angeles, 2005.

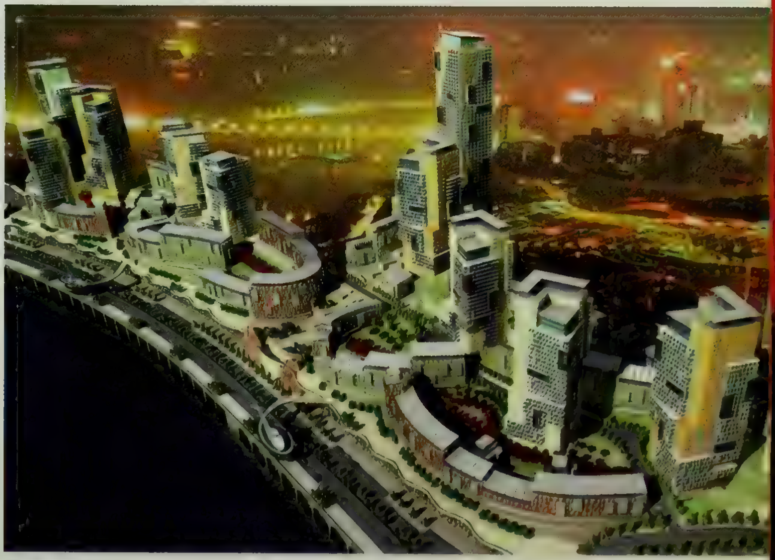


Joseph A. Steger Student Life Center, University of Cincinnati, 2004.

Clarice Smith Center for Performing Arts, University of Maryland, College Park, 2001.

Tegel Harbor Phase 1 Housing, Berlin, 1988.

United States Embassy, Berlin, Germany (in construction).



Chun Sen Bi An Master Plan and Housing, Chongqing, China (in construction).

American Institute of Architects

Winners and Jurors 2006

WINNERS

Architecture (page 152)

Children's Museum of Pittsburgh: *Koning Eizenberg Architecture; Perkins Eastman Architects (architect of record);* **Washington State Legislative Building Rehabilitation:** *SRG Partnership; Einhorn Yaffee Prescott (architect of record);* **Frieder Burda Collection Museum:** *Richard Meier & Partners; Freier Architekt (associate architect);* **TRUMPF Customer and Administration Building:** *Barkow Leibinger Architects;* **Bigelow Chapel:** *Hammel, Green & Abrahamson;* **Joseph A. Steger Student Life Center:** *Moore Ruble Yudell Architects & Planners; Glaserworks (associate architect);* **William J. Clinton Presidential Center:** *Polshek Partnership Architects; Polk Stanley Rowland Porter Architects; Wistell Evans Rasco Architects & Planners; Woods Caradine Architects (associate architects);* **Ballard Library and Neighborhood Service Center:** *Bohlin Cywinski Jackson;* **Visiting Artists House:** *Jim Jennings Architecture;* **Museo Picasso Malaga:** *Gluckman Mayner Architects; Camara/Martin Delgado Arquitectos (associate architect);* **Washington Convention Center:** *TVS – D&P – Mariani; Thompson, Ventulett, Stainback (associate architect)*

Interiors (page 174)

Woolly Mammoth Theatre Company: *McInturff Architects;* **Mother London:** *Clive Wilkinson Architects; Allford Hall Monaghan Morris Architects (architect of record);* **Schepens Eye Research Institute:** *Payette;* **Bizarre:** *Randy Brown Architects;* **Google Headquarters–Mountain View:** *Clive Wilkinson Architects;* **The Royal Bank of Scotland:** *DMJM Rottet;* **Nissan Design America Farmington Hills Michigan:** *Luce et Studio Architects; Albert Kahn Asssociates (executive architect);* **Karla:** *Rene Gonzalez Architect;* **English House:** *Chu + Gooding Architects; Kay Kollar Design;* **Temporary Theater:** *BOORA Architects;* **Skillman Library:** *Ann Beha Architects*

Urban Design (page 192)

Lloyd Crossing Sustainable Urban Design Plan: *Mithun;* **University Square, University of British Columbia:** *Moore Ruble Yudell Architects & Planners;* **Millennium Park:** *Skidmore, Owings & Merrill (master architect and planner); Gehry Partners; Gustafson Guthrie Nichol; Hammond Beeby Rupert Ainge; Harley Ellis Devereaux; Krueck & Sexton Architects; McDonough Associates; Muller & Muller Architects; OWP/P; Renzo Piano Building Workshop; Teng & Associates;* **Martin Luther King Plaza Revitalization:** *Torti Gallas & Partners;* **The Arc: A Formal Structure for a Palestinian State:** *Suisman Urban Design;* **North Point:** *CBT/Childs Bertman Tseckares; Greenberg Consultants (associate architect);* **Chippewa/Cree Reservation Plan:** *Ferdinand S. Johns, AIA, with Allison Orr; Community Design Center (associate architect);* **Swiss Government Plaza:** *Lee & Mundwiler Architects; Stauffenegger & Stutz Visual Design (associate architect)*

25 Year Award (page 200)

Thorncrown Chapel: *Fay Jones & Associates*

Firm of the Year (page 202)

Moore Ruble Yudell Architects & Planners: *Buzz Yudell, FAIA, John Ruble, FAIA*

Gold Medal (page 212)

Antoine Predock, FAIA

JURORS

Architecture

Jury Chair

***Robert E. Hull**, FAIA*

The Miller | Hull Partnership has received more than 70 awards, including the AIA Architecture Firm Award in 2003, since Robert Hull cofounded it in 1980. Its work has been credited with redefining Pacific Northwest Regional Modernism. Hull is a past president of the Seattle Architectural Foundation.

***John J. Castellana**, FAIA, Bloomfield Hills, Mich.; **Jacob Day**, AIAS Representative, College Park, Md.; **Brian Ferriso**, Tulsa; **Eleanor Esser Gorski**, AIA, Chicago; **Everardo Agosto Jefferson**, AIA, New York; **Harry G. Robinson III**, FAIA, Washington, D.C.; **Clark P. Stevens**, AIA, Los Angeles; **Katerine R. Williams**, Assoc. AIA, Richmond, Va.*

Interior Architecture

Jury Chair

***Linda Searl**, FAIA*

Linda Searl has served on the AIA's Strategic Planning Advisory Committee since 2000 and has also served on the AIA's Board of Directors. Recently, she was named vice chair of the Chicago Planning Commission. Her firm, Linda Searl and Associates Architects, works with a number of commercial, residential, and educational clients.

***Andrea P. Leers**, FAIA, Boston; **Mark D. L'Italien**, AIA, San Francisco; **John I. Mesick**, AIA, Schodack Landing, N.Y.; **Herman Mhire**, Lafayette, La.*

Regional and Urban Design

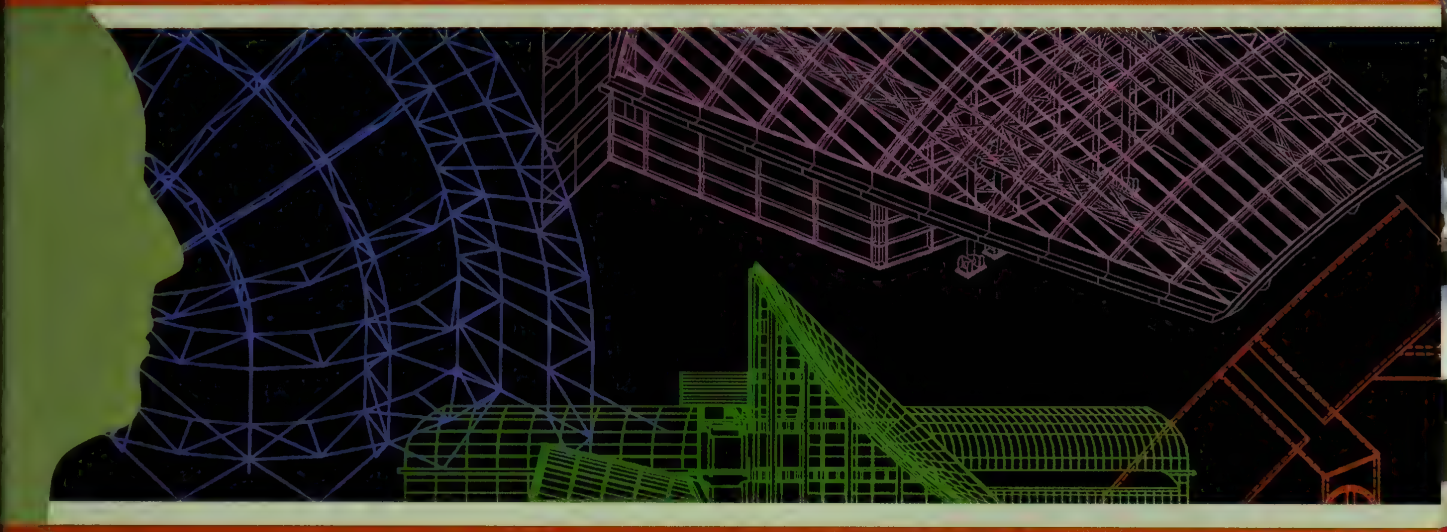
Jury Chair

***Diane T. Georgopulos**, FAIA*

Diane Georgopulos won the American Institute of Architects Thomas Jefferson Award for Public Architecture in 2005. She has co-chaired the AIA Center for Communities by Design and has chaired the AIA Housing Committee. Georgopulos works at MassHousing, an affordable housing finance lender, reviewing housing and transit-oriented development proposals.

***Michael A. Mense**, FAIA, Anchorage; **Lisa M. Padilla**, AIA, Los Angeles; **Nora Patterson**, Sarasota, Fla.; **E. Crichton Singleton**, FAIA, Kansas City, Mo.*

Looking Forward at 50



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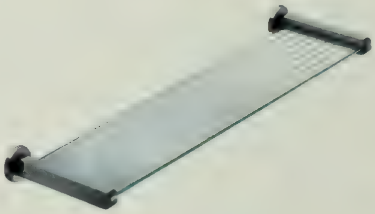

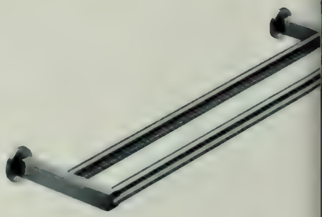

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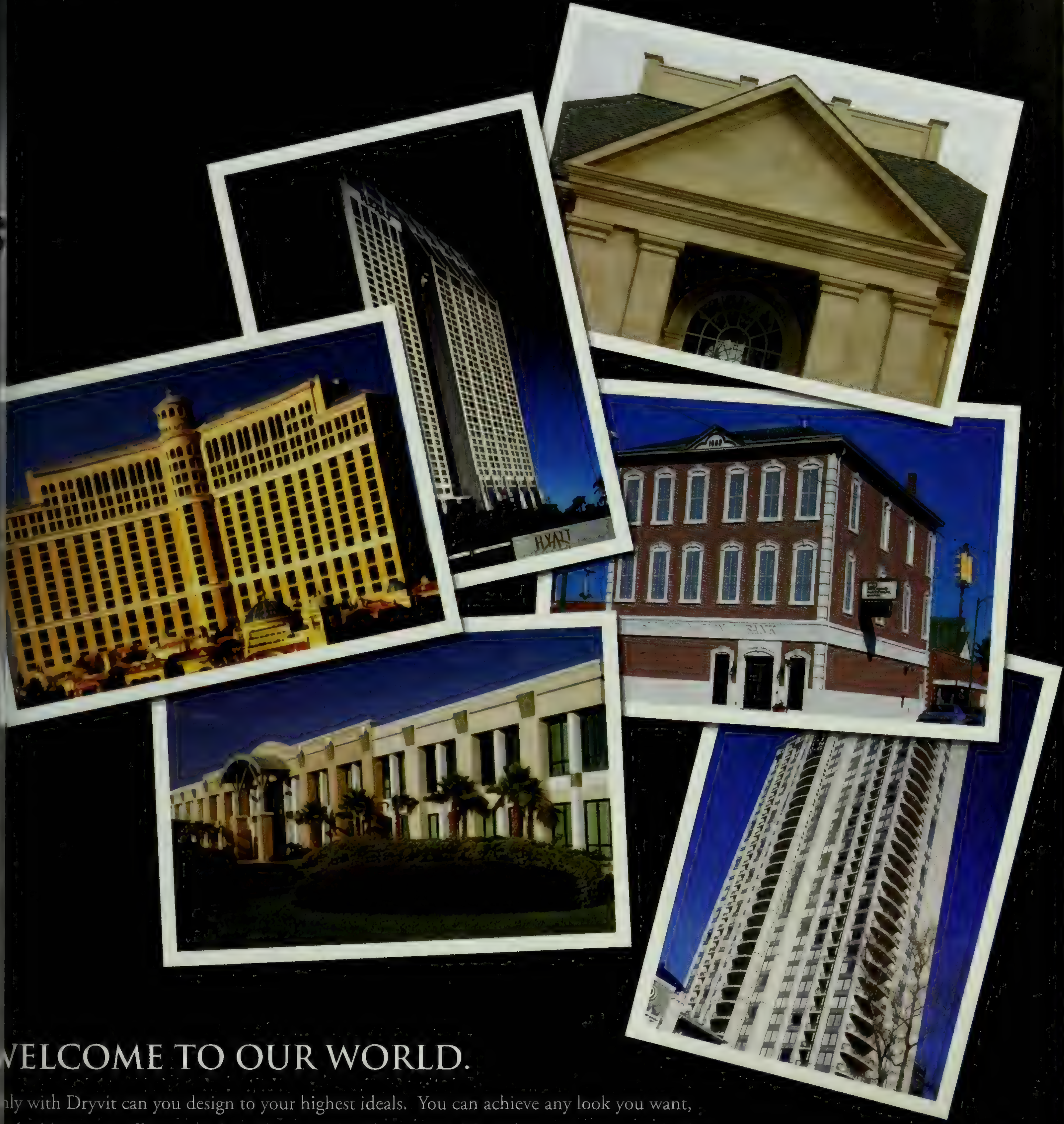

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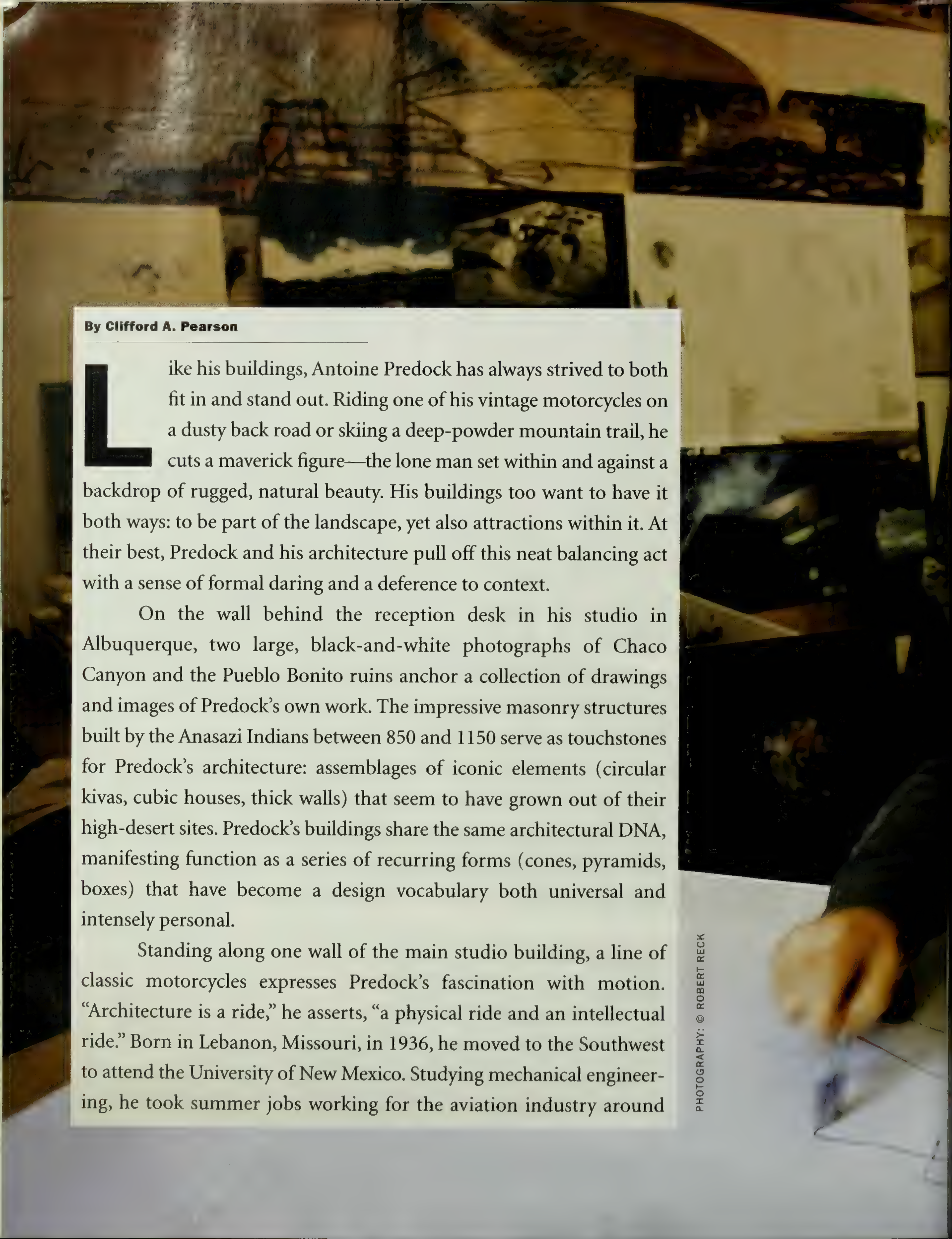


PHOTOGRAPHY: © ROBERT RECK

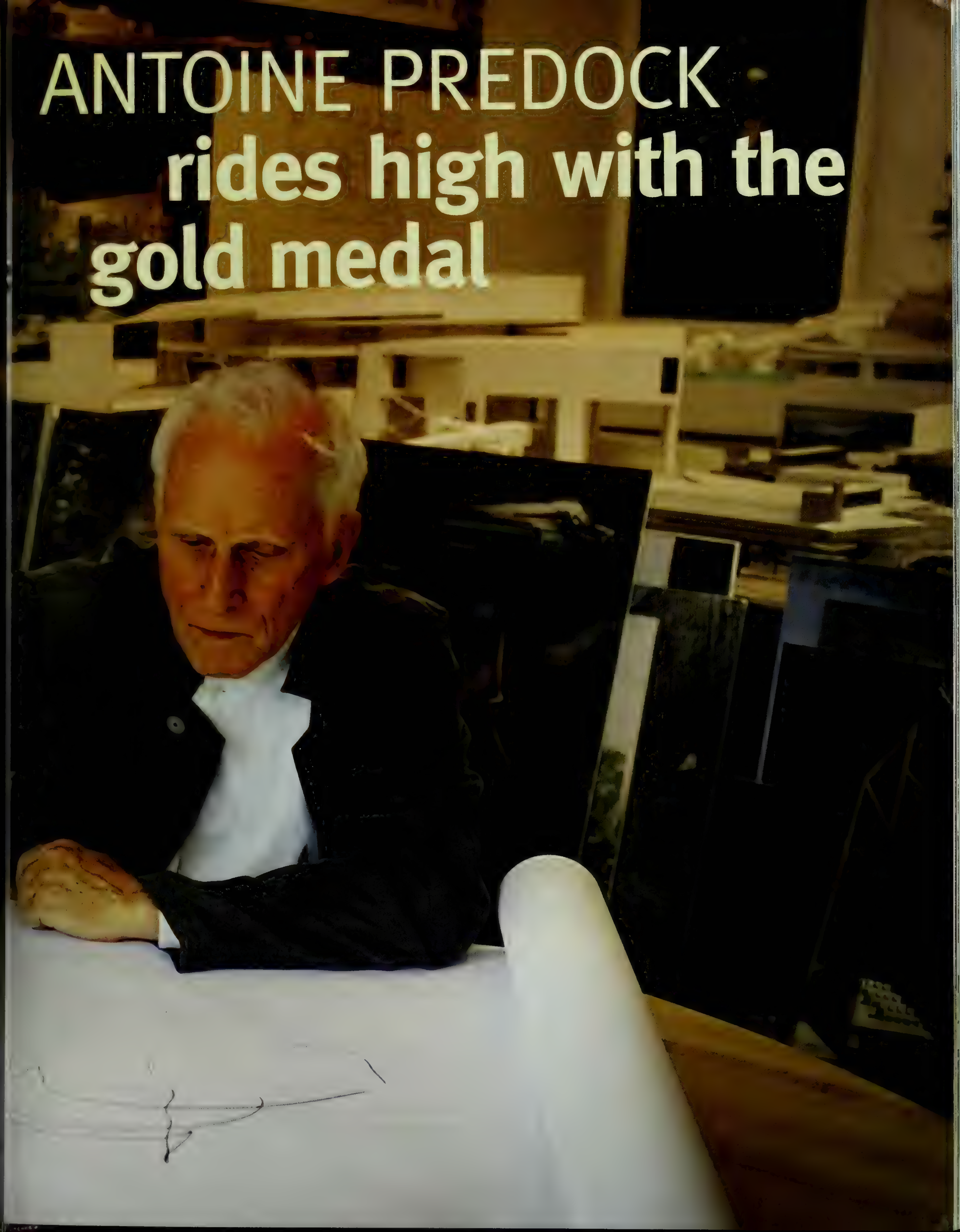
By Clifford A. Pearson

Like his buildings, Antoine Predock has always strived to both fit in and stand out. Riding one of his vintage motorcycles on a dusty back road or skiing a deep-powder mountain trail, he cuts a maverick figure—the lone man set within and against a backdrop of rugged, natural beauty. His buildings too want to have it both ways: to be part of the landscape, yet also attractions within it. At their best, Predock and his architecture pull off this neat balancing act with a sense of formal daring and a deference to context.

On the wall behind the reception desk in his studio in Albuquerque, two large, black-and-white photographs of Chaco Canyon and the Pueblo Bonito ruins anchor a collection of drawings and images of Predock's own work. The impressive masonry structures built by the Anasazi Indians between 850 and 1150 serve as touchstones for Predock's architecture: assemblages of iconic elements (circular kivas, cubic houses, thick walls) that seem to have grown out of their high-desert sites. Predock's buildings share the same architectural DNA, manifesting function as a series of recurring forms (cones, pyramids, boxes) that have become a design vocabulary both universal and intensely personal.

Standing along one wall of the main studio building, a line of classic motorcycles expresses Predock's fascination with motion. "Architecture is a ride," he asserts, "a physical ride and an intellectual ride." Born in Lebanon, Missouri, in 1936, he moved to the Southwest to attend the University of New Mexico. Studying mechanical engineering, he took summer jobs working for the aviation industry around

ANTOINE PREDOCK rides high with the gold medal



Albuquerque. "I like to think about machines and technology in relation to landscape and architecture," he says. While taking an architecture class taught by Don Schlagel, Predock decided to leave engineering. "Schlagel became my mentor, showing me what architecture could be."

Schlagel also encouraged him to look beyond New Mexico. Although he had never been east of the Mississippi, Predock moved to New York and enrolled at Columbia University, where he hung out with dancers and watched performances by Merce Cunningham and John Cage. At Columbia, he met Jennifer Linnell, a dancer who became his first wife and muse. Watching her dance and eventually collaborating with her on performances, he learned about the human body in motion through space. "My buildings are processional," states Predock. "Watching Jennifer, I started thinking about the choreography of architecture."

After graduating, Predock and Linnell moved to Albuquerque and set up a small compound where they lived and each had a studio. Over the years, that compound grew in an ad hoc, opportunistic way, as if it were a physical expression of Cage's theories of chance and encounter. "We wanted to create a place that was inclusive of many disciplines and broke down borders between living and working," says the architect. Although Predock and Linnell are no longer together and neither lives at the walled compound, it remains the architect's studio, sprawling over a cluster of small buildings that are connected by rough-sawn-fir canopies and brick-paved courtyards dotted with cottonwood trees. Today, Predock is married to Constance DeJong, a sculptor with whom he has collaborated on projects such as the Minnesota Gateway Landmark, a folded-Cor-Ten monument adjacent to Predock's Minnesota Gateway building at the University of Minnesota in Minneapolis.

Sketches from his wide travels help inform Predock's architecture and his sense of place.

Starting with La Luz Community, an artificial escarpment of town houses built in 1970 on a mesa along the Rio Grande River in Albuquerque, Predock's work has addressed the issue of place. Because La Luz employs adobe construction and appears as an integral part of its landscape, Predock quickly developed a reputation as an architect wedded to his home turf. Everyone thought of him as a regional architect. While this helped him establish an identity distinct from other Modernists, it also became a straight jacket from which he has worked hard to break free.

Subsequent projects, such as the Rio Grande Nature Center in Albuquerque (1982) and the Nelson Fine Arts Center at Arizona State University in Tempe (1989), again fused strong connections with their particular sites—the nature center acting as a concrete viewing blind nestled in a wildfowl habitat, and the art center forming a surrogate mountain range of stepped buildings, masonry terraces, and cool, cavelike spaces.

Predock often likens his notions of place to a road cut that exposes many layers of influences, from deep bedrock and ancient artifacts to newer accretions of asphalt and structure. "I try to understand place on a deeper level than just the physical or environmental aspects," he explains. "It includes cultural and intellectual forces, too. It's an inclusive approach that brings in many disciplines and sees place as a dynamic thing."

While New Mexico has helped shape Predock's concept of place, he doesn't see it limiting his architecture. "The lessons I've learned here about responding to the forces of a place can be implemented anywhere," he says. "I don't have to invent a new methodology for new contexts. It is as if New Mexico has already prepared me."

Predock's design process begins with research and sketches that get combined into a large, often scroll-like collage created by him and his project team. Then his staff assembles cardboard blocks for each functional element in the program, and he uses these to make a clay model of the project. Carving and cutting the clay, Predock starts shaping the design, working much as a sculptor does. Then his team photographs the model with a digital camera and uses these images to create digital drawings and models. "The computer has allowed the process to become way richer, more complex," he states.

Now 70, he shows no signs of slowing down. He currently has about 20 active projects and 35 people working in Albuquerque and smaller outposts in Indiana, Los Angeles, and Taipei, Taiwan. In the past year and a half, he has won two international design competitions: one for a branch of the National Palace Museum in Taibo City, Taiwan, and the other for the Canadian Museum for Human Rights in Winnipeg.

For his National Palace Museum entry, he created a 22-foot-long collage scroll depicting his building as an abstracted landscape. The building has a marble base, a soaring central space that he likens to a jade mountain, and bronze-clad galleries spiraling around the central hall and connected by ribbonlike bridges. "As a gringo architect, I wasn't going to make a Chinese building or do a Chinese garden," he says. But he used water, stone, and an episodic approach to space, which refer in a modern way to Chinese building traditions. His design for the Canadian Museum for Human Rights calls for a pile of stone galleries wrapped by a glass cloud. To create the cloud, he will use shingled glass with photovoltaic cells embedded in some places. Both the Taiwan and Canada projects are scheduled to be completed in 2009.

In recent years, he has found new influences. An inveterate traveler who sketches wherever he goes, Predock says the chaotic energy of Asian night markets and the dreamlike imagery of underwater habitats are seeping into his work, thanks to frequent trips to China and his wife's encouraging him to take up her hobby of scuba diving. "Underwater, I experience space with my body. I'll see a school of fish gathering and moving together and I'll exclaim, 'This is architecture.' "

No matter what he's doing—whether it's designing or diving—Antoine Predock makes visceral connections. To fully appreciate his buildings you must touch them, kick them, walk through them, sit on them. Years ago, he told this writer, "Before you start designing, you have to get your bony ass on the ground and feel the site with your body." On another occasion, while giving a tour of his Turtle Creek House in Dallas, he jumped on a large circular skylight to demonstrate its strength. Simply explaining it wouldn't do.

The best of his buildings—such as the Nelson Fine Arts Center; the American Heritage Center in Laramie, Wyoming; and the Spencer Theater in Alto, New Mexico—emerge from their rugged sites as if they had been pushed up by geological forces. They do not sit lightly on the land, but engage it in a strenuous embrace. Eventually, they become part of the landscape itself, much as the structures at Pueblo Bonito have fused with the red earth of Chaco Canyon. ■

a Luz Community, lbuquerque, 970
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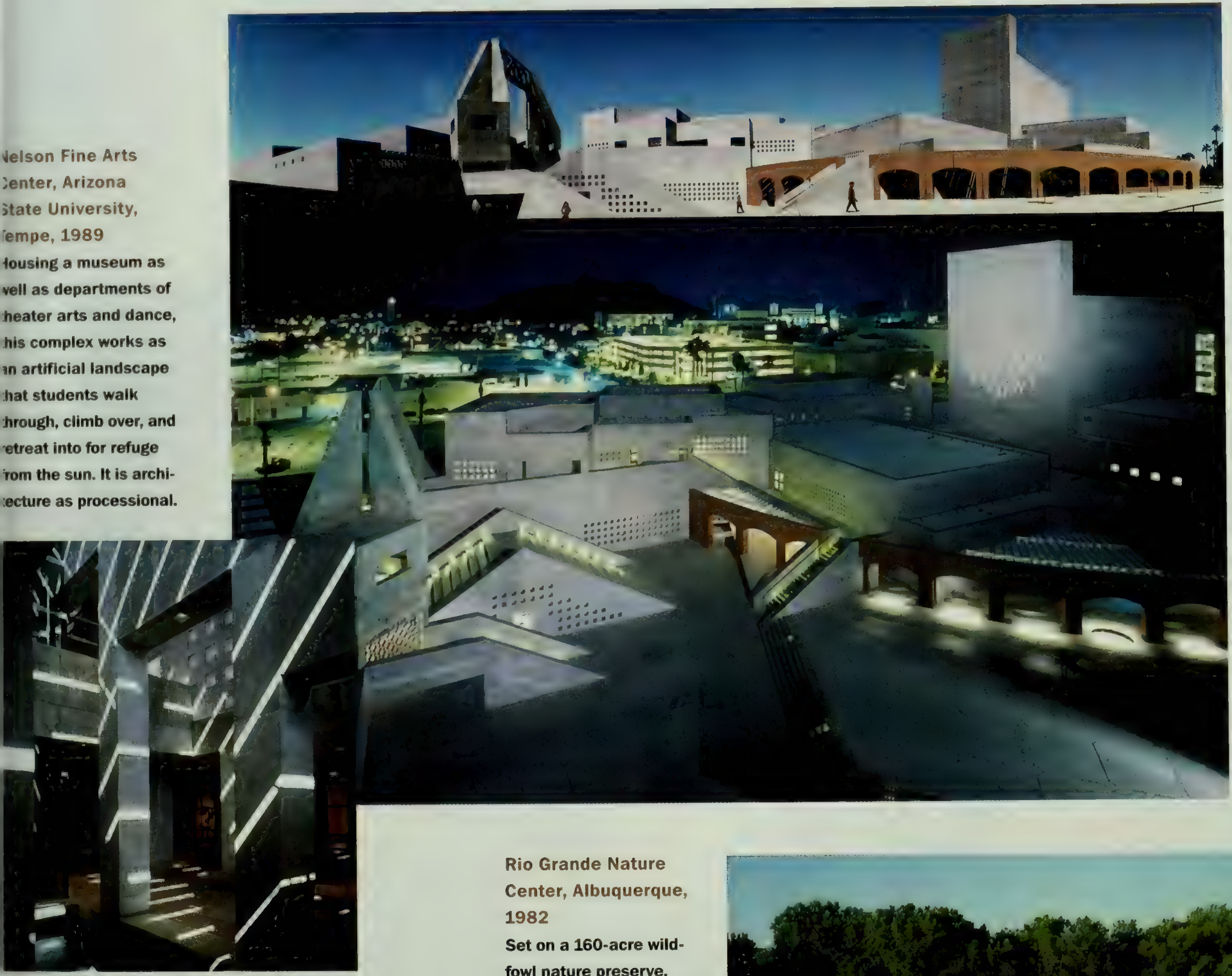
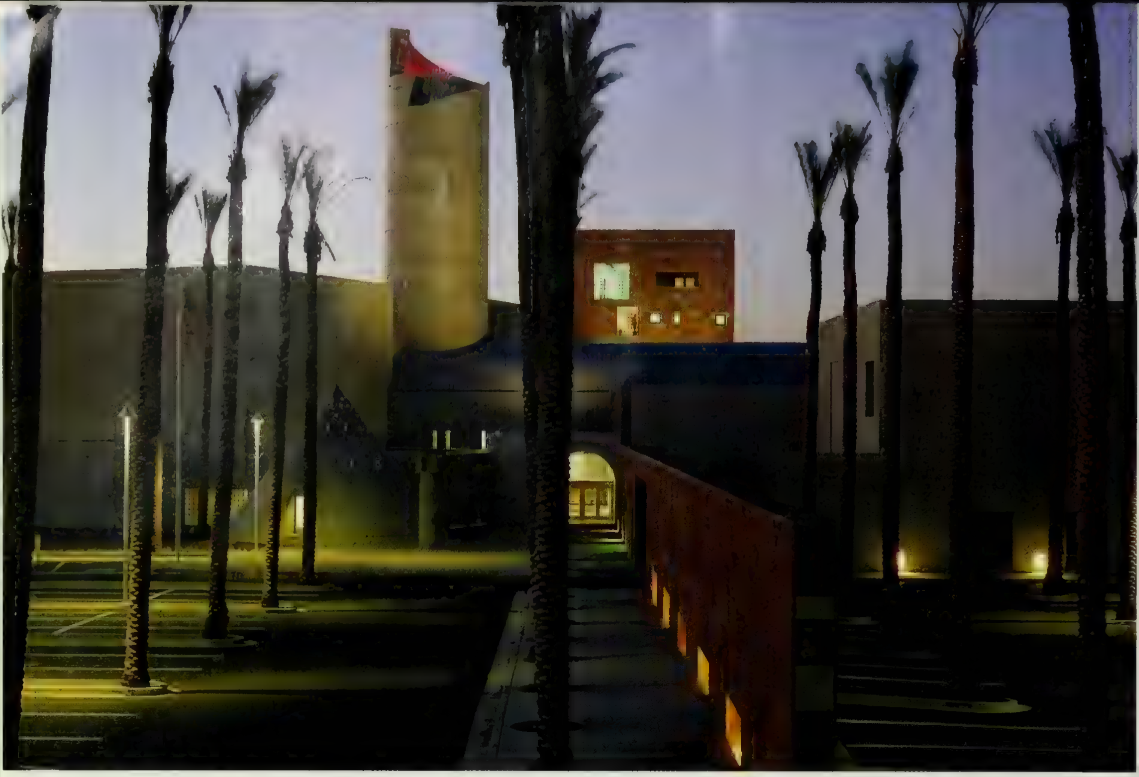
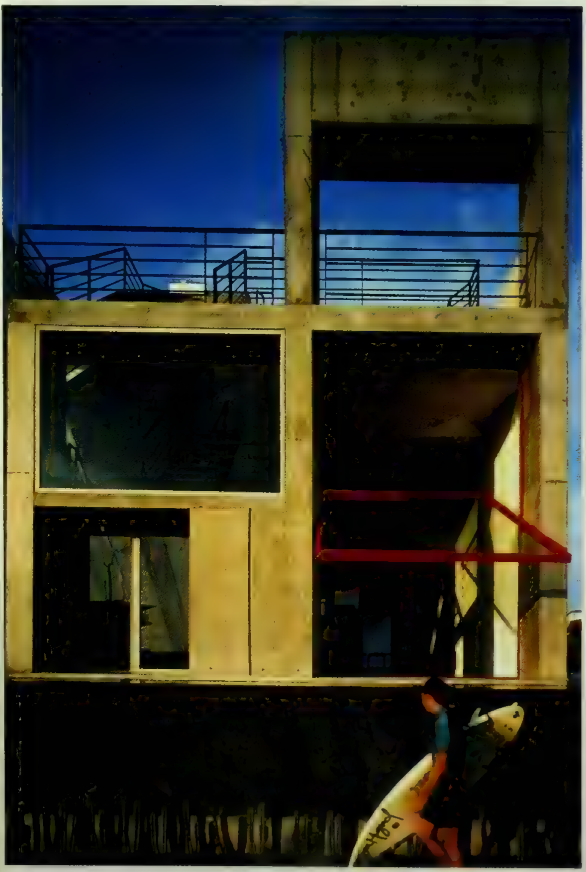


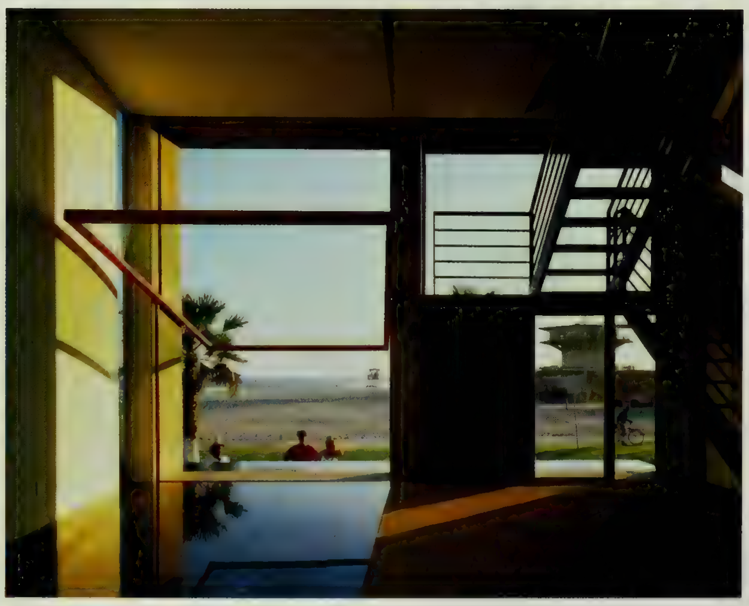
Rio Grande Nature Center, Albuquerque, 1982
Set on a 160-acre wildfowl nature preserve, this poured-in-place concrete building offers controlled views over marshland where migratory birds stop each year.



Las Vegas Library and Children's Museum, Las Vegas, 1990

Since this library complex sits adjacent to the place where two historic trails converge, Predock designed it as a crossroads building. Its angular alignment receives visitors coming from different directions.





Venice House, Venice, California, 1991

This concrete-frame house turns its back on the land and all the things built by man. Instead, it focuses on the ocean, drawing attention to it with an 8-by-14-foot window that rotates on roller bearings, and an adjacent sliver opening.

rtle Creek House,
allas, 1993
ilt for clients with
passion for bird-
atching, this house
esents a solid lime-
one front to its
ighbors but opens
to a ravine in the
ack and offers resi-
ents a sloping “sky
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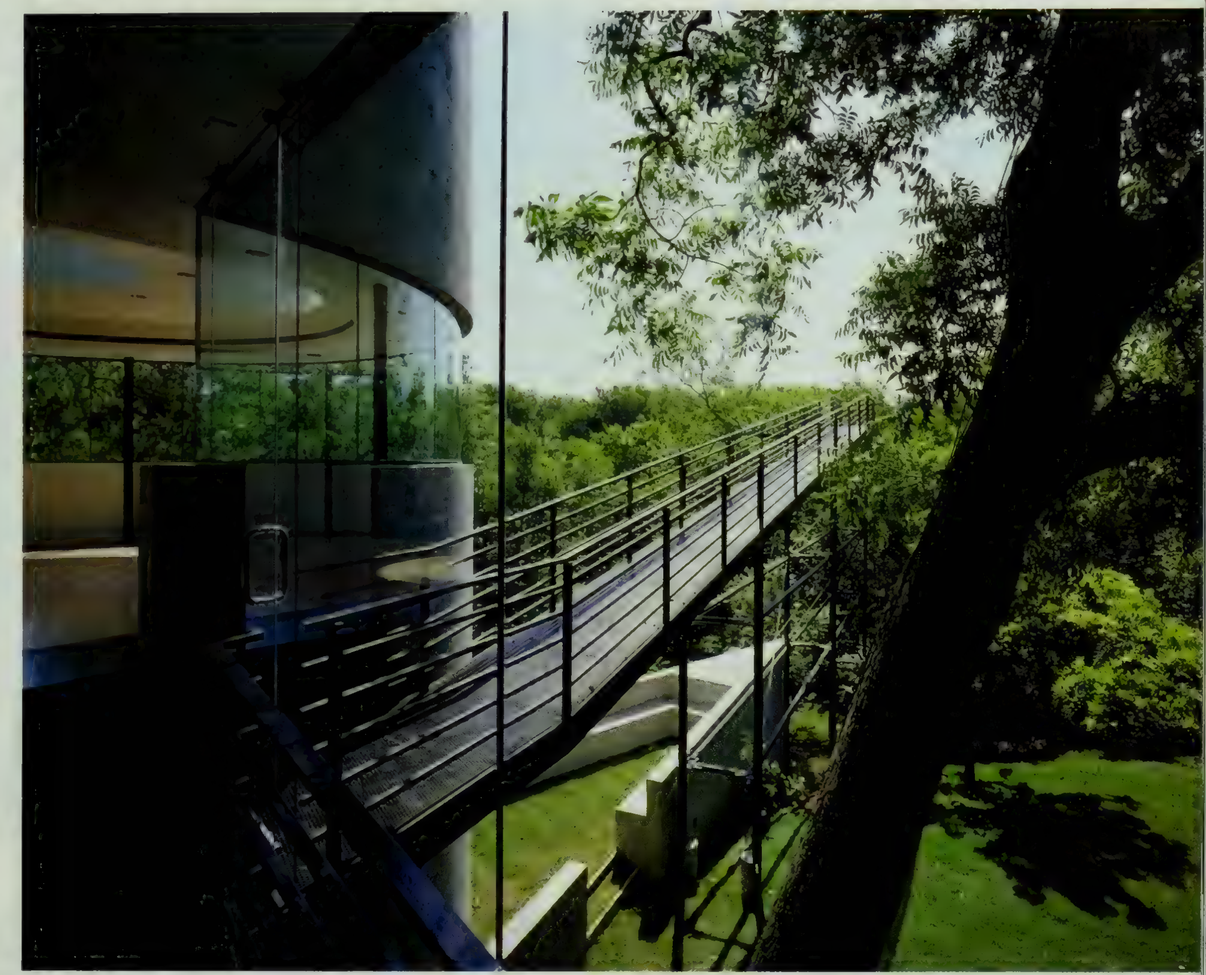
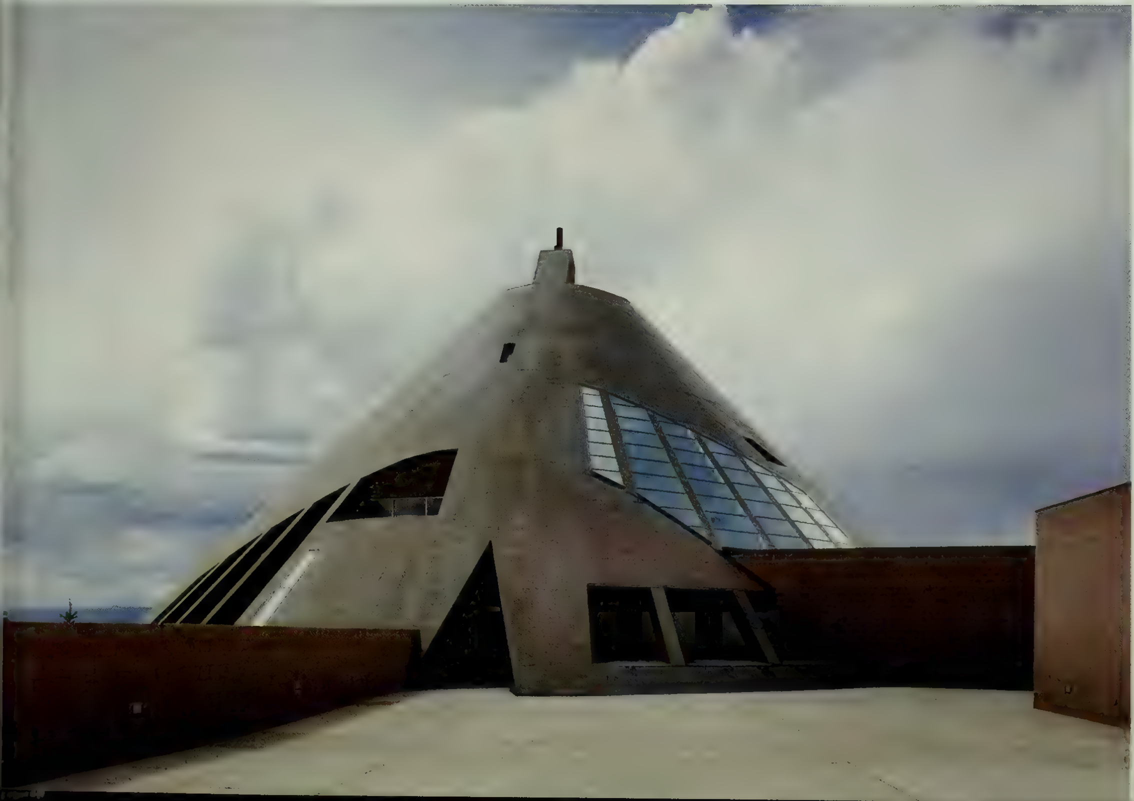
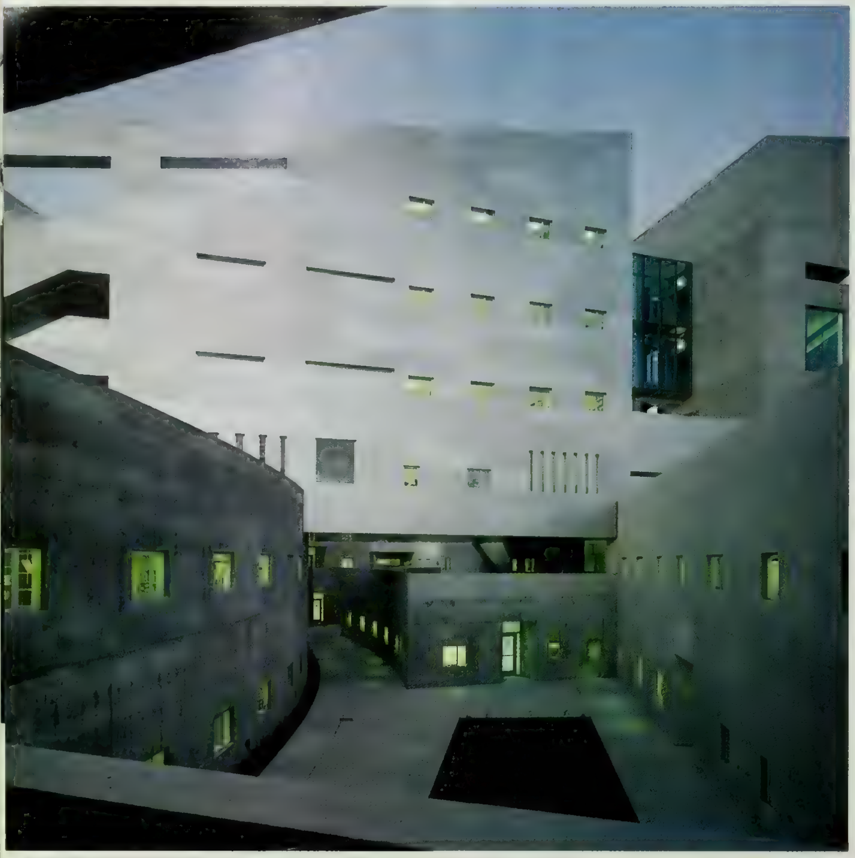
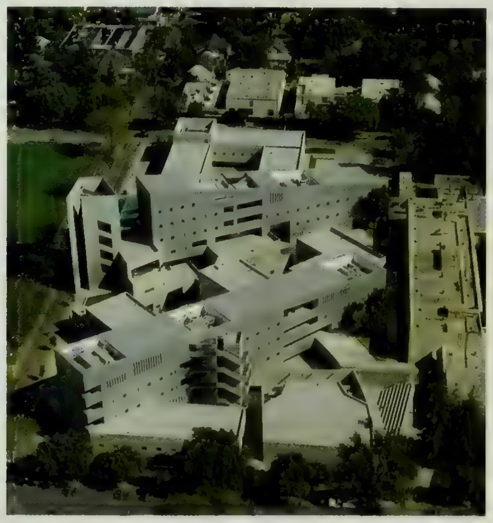


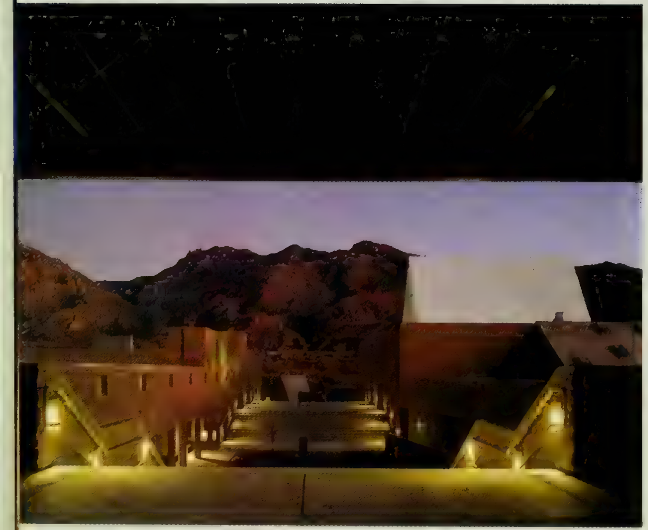


American Heritage Center and Art Museum, University of Wyoming, Laramie, 1993
Set on a man-made mesa on axis with two distant mountains, the building evokes an “archival” mountain detailed like an airplane wing and positioned to deflect the area’s strong winds.



Social Sciences and Humanities Building, University of California, Davis, 1994
Predock aligned the low buildings in the complex to refer to watercourses that run through the area's agricultural fields. Taller, metal-clad blocks house offices and offer distant views of the Central Valley.

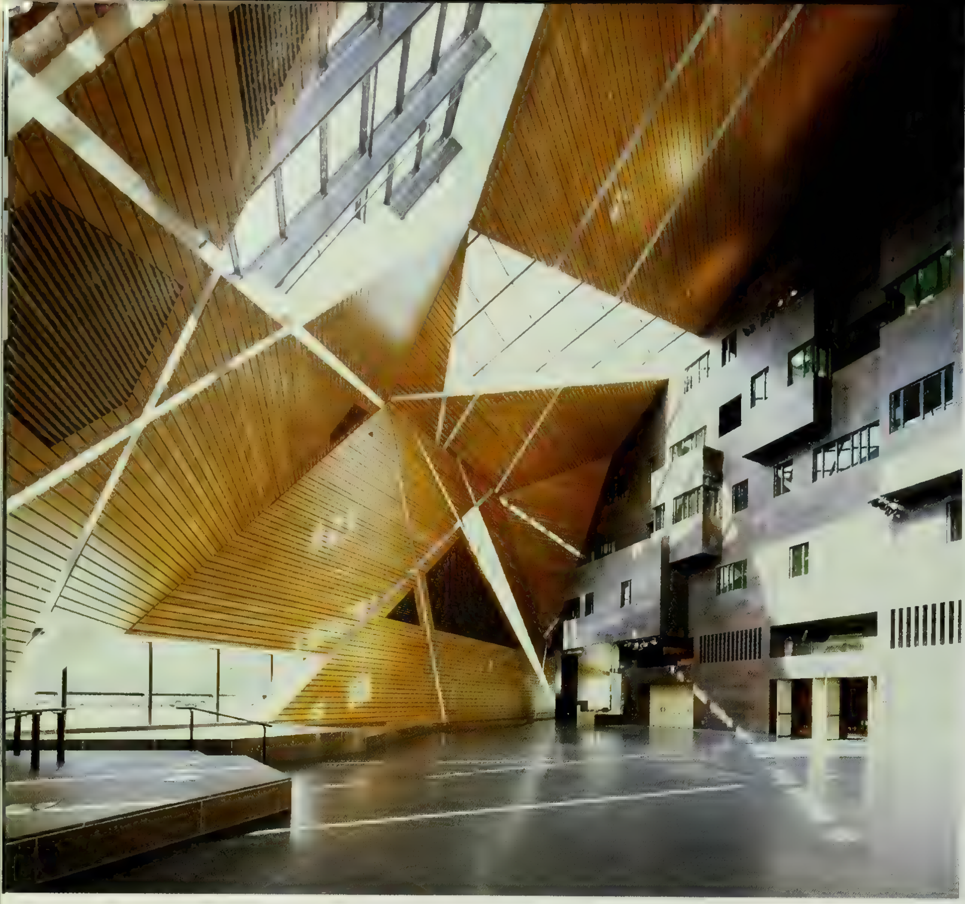


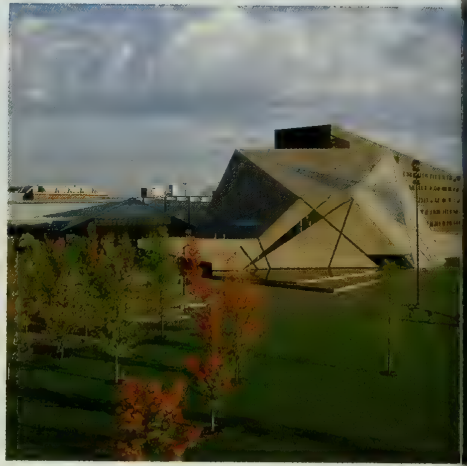


Ventana Vista Elementary School, Tucson, 1995
A series of linked courtyards helps establish "neighborhoods" within this sprawling school, and each neighborhood is scaled to the size of the children using it.

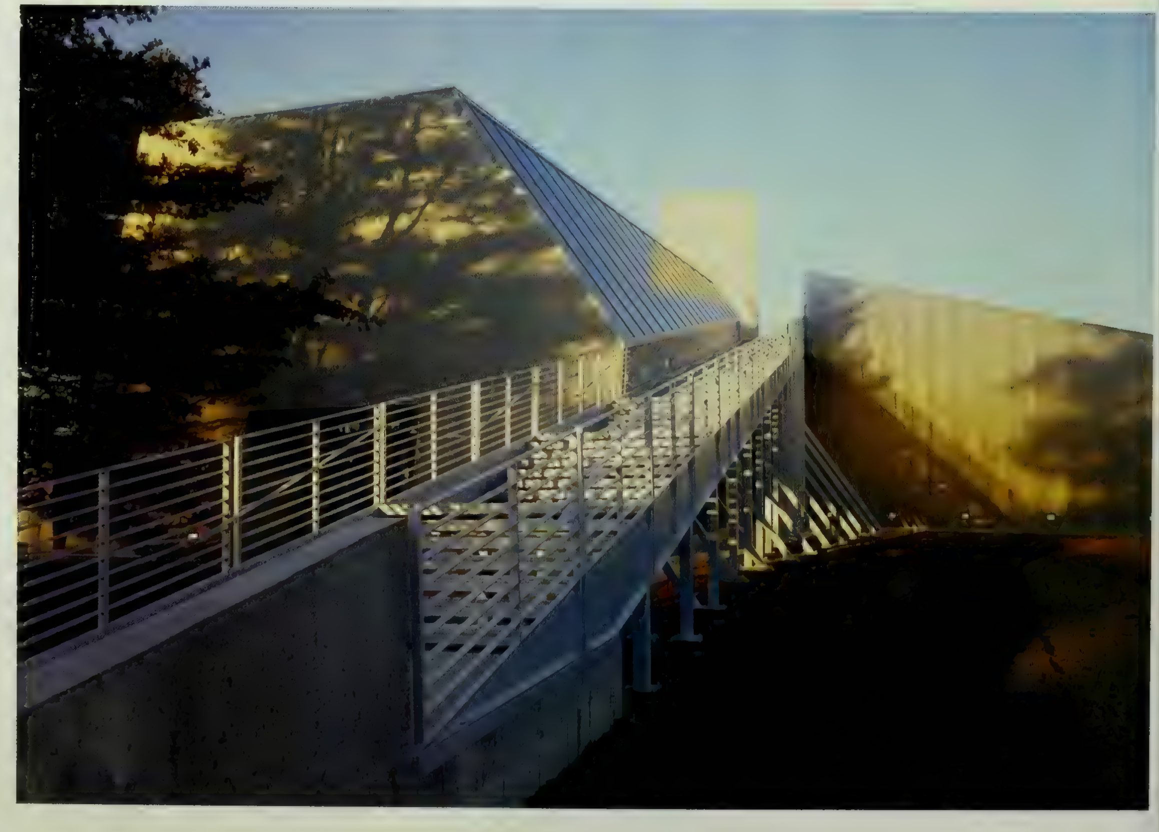
Arizona Science Center, Phoenix, 1997
Shadow and light animate the angular forms of this complex where exhibition space, two theaters, and a planetarium come together. Much of the building sits below grade to reduce solar loads.

Spencer Theater for the Performing Arts, Alto, N.Mex., 1997
[RECORD, May 1998, page 152]
The wedgelike form of this limestone-clad building suggests a sculpted stone monolith emerging from the earth. A faceted shell of glass and steel protrudes from the main structure to serve as an entry lobby and gathering space.

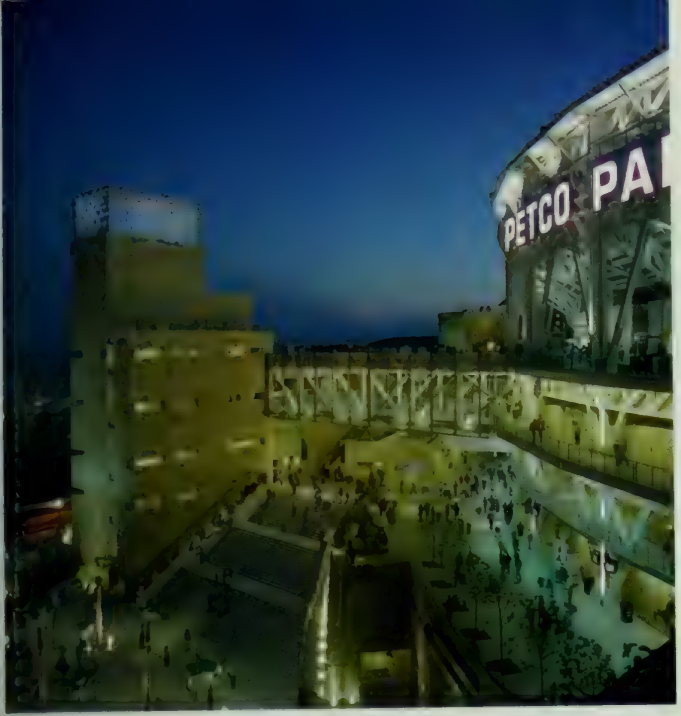


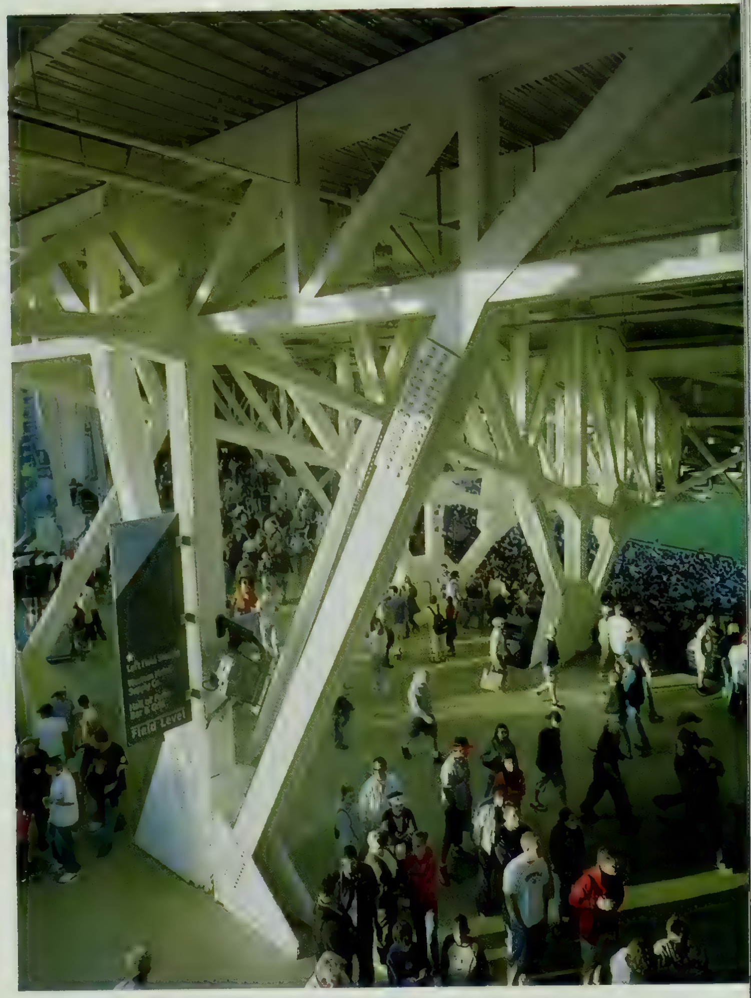


Gateway Center, University of Minnesota, Minneapolis, 2000
Located at a key campus entrance, this project serves four different departments, allowing them to have their own identities yet share common public spaces.

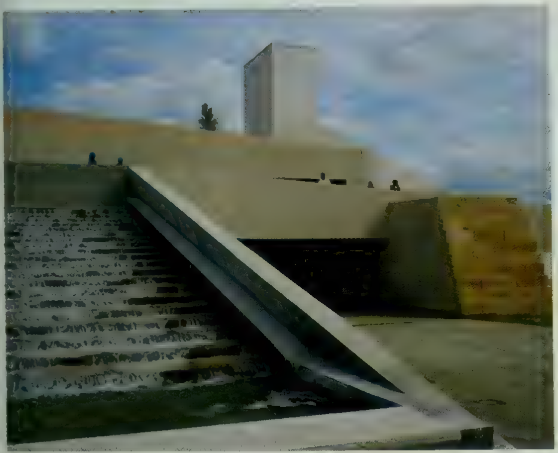


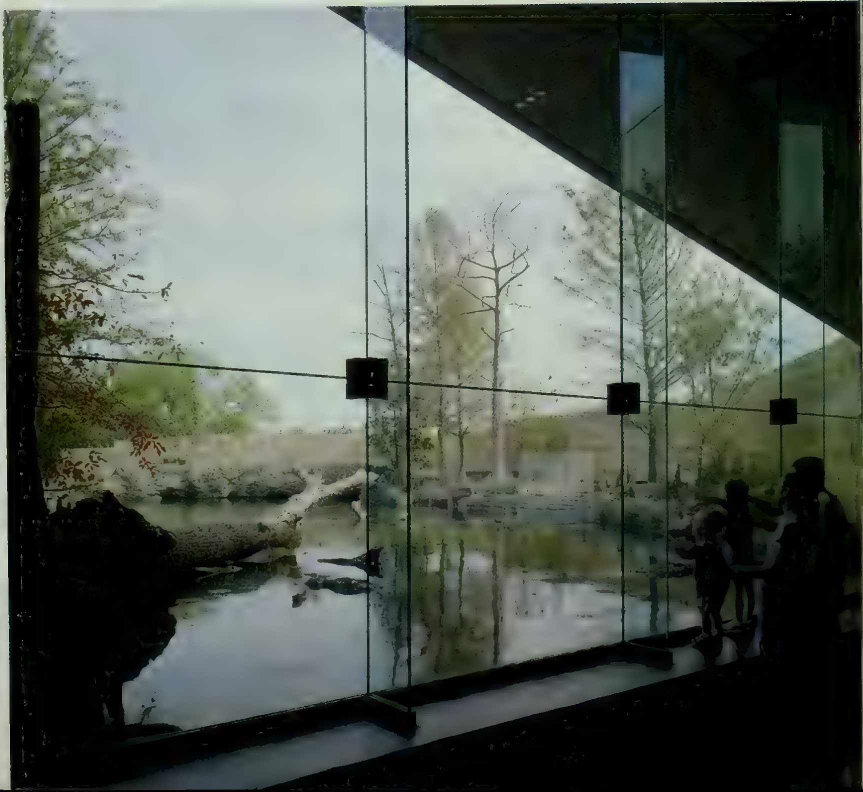
Tang Teaching Museum, Skidmore College, Saratoga Springs, N.Y., 2000
[RECORD, May 2001, page 224]
Embodying an interdisciplinary approach, this project brings together teaching, exhibition, and support spaces in a fluid arrangement.





San Diego Padres Ballpark, San Diego, 2004
Surrounded by stepped terraces where people can eat and socialize between innings or before games, this baseball stadium breaks the old design formula by letting the sun shine on concession stands and perimeter circulation.

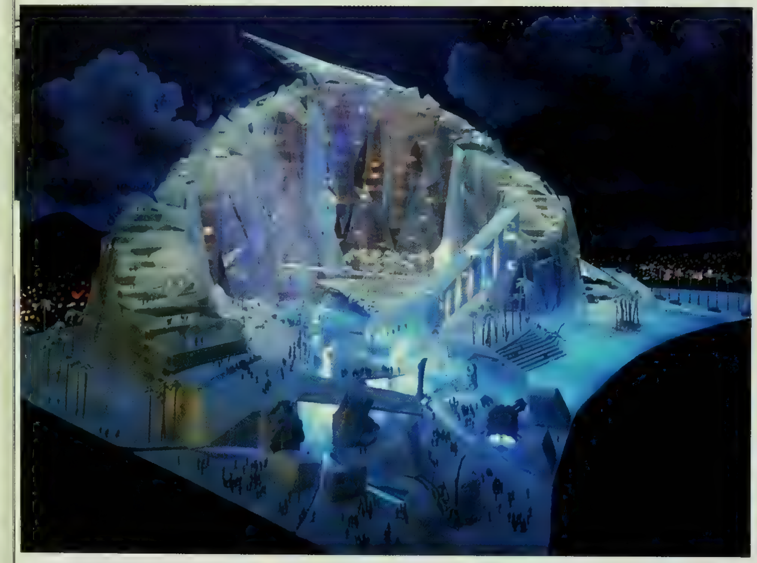




Flint RiverQuarium, Albany, Georgia, 2004
[RECORD, May 2005, page 218]
Predock's design weaves building, landscape, and exhibitions together in this nature center devoted to the ecology and geology of the Flint River basin.

Palm Bay Resort, Agadir, Morocco, 1990

Although not built, Predock is proud of the way this convention resort would have integrated a eucalyptus forest, sand dunes, water, and a long string of gardens and low-rise buildings.



Atlantis Hotel and Casino, Las Vegas, 1994

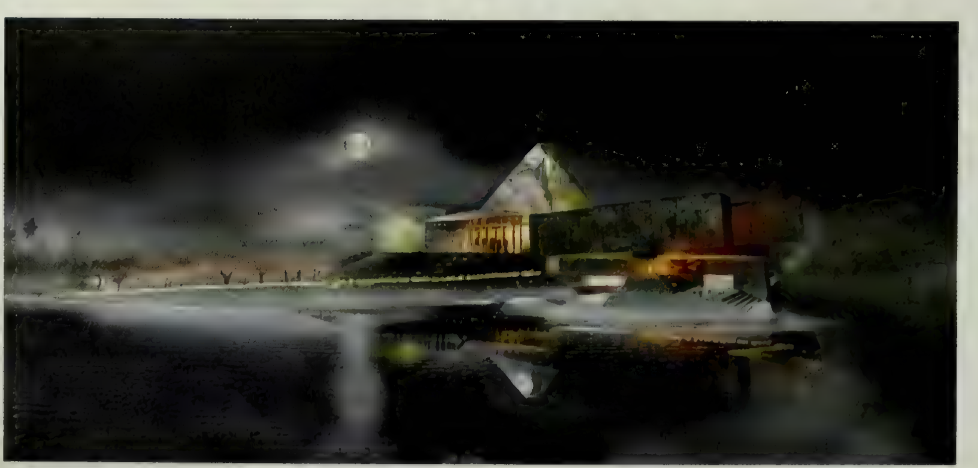
Instead of a dark, windowless environment, this casino (also unbuilt) would have offered gamblers a setting where light filters through a giant glass shell and emanates from a realm below.

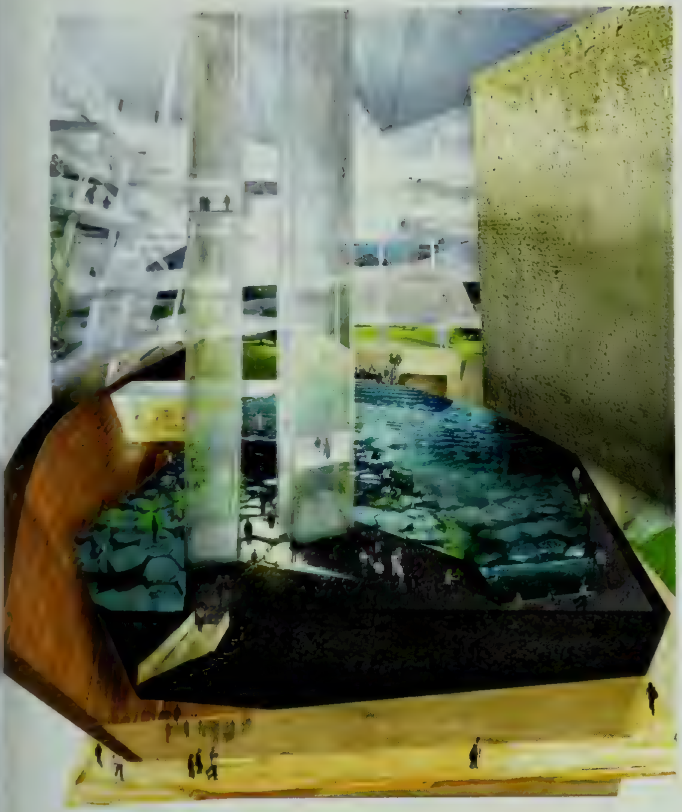
On the boards: past and future

Predock currently has about 20 active projects going in his main office in Albuquerque and satellites in Indianapolis, Los Angeles, and Taipei, Taiwan. Like every architect, he has some favorite projects that never got built, including an ecologically sensitive resort in Morocco and a 3,500-room hotel and casino in Las Vegas that would have used Plato's Atlantis as its theme. Although he doesn't enter many competitions, he won two international ones in the past two years: for a southern branch of the National Palace Museum in Taiwan, and the Canadian Museum for Human Rights in Winnipeg. Both of these projects are moving forward and promise to be major additions to his body of work. As he has throughout his career, Predock mines his fascination with geology, landscape, and culture in these designs.

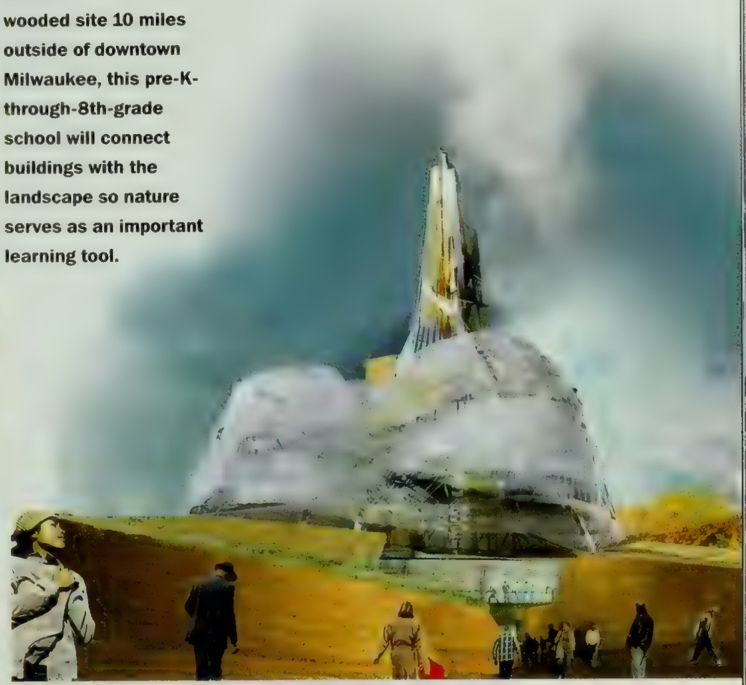
National Palace Museum, Taibo City, Taiwan, 2009

Using abstract references to Chinese culture, the design for the southern branch of the Palace Museum calls for a "jade" mountain, gardens, and ribbonlike circulation.

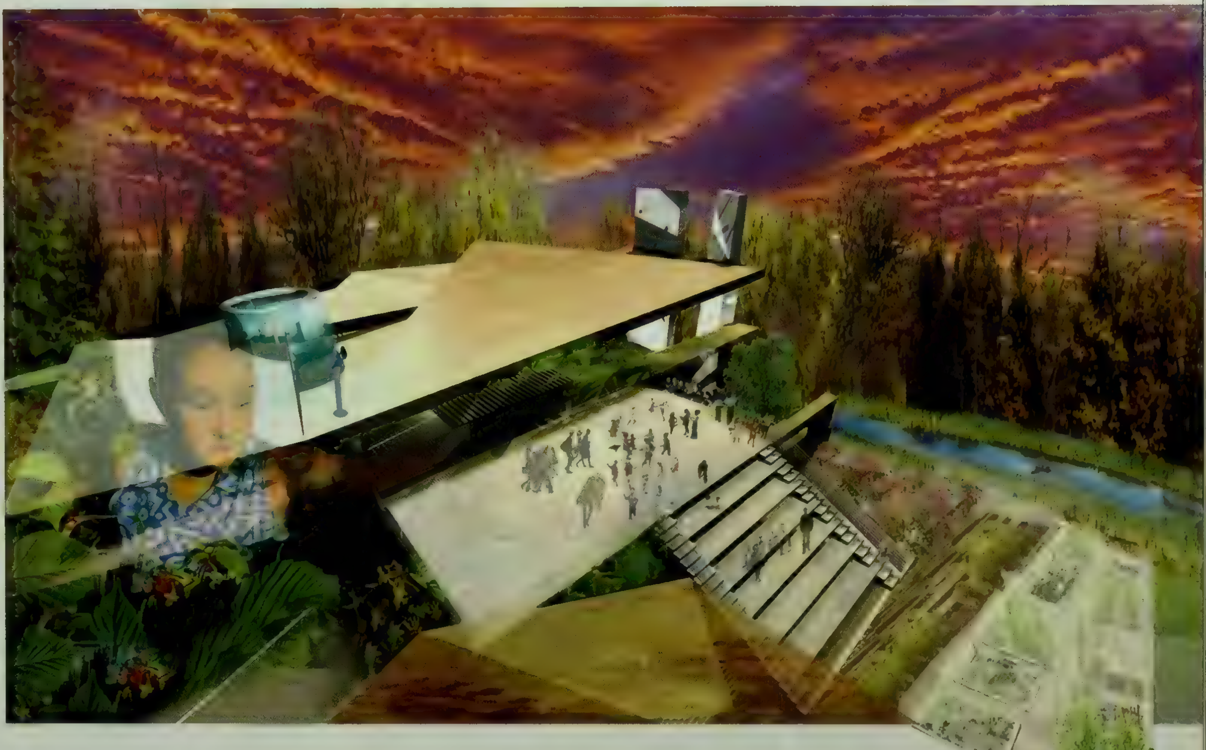




Indian Community School, Milwaukee, 2007
Set on a 200-acre wooded site 10 miles outside of downtown Milwaukee, this pre-K-through-8th-grade school will connect buildings with the landscape so nature serves as an important learning tool.



Canadian Museum for Human Rights, Winnipeg, 2009
The competition-winning design for this museum features a shingled-glass "cloud" with photovoltaic cells embedded in some areas, a Garden of Contemplation, and a Tower of Hope.



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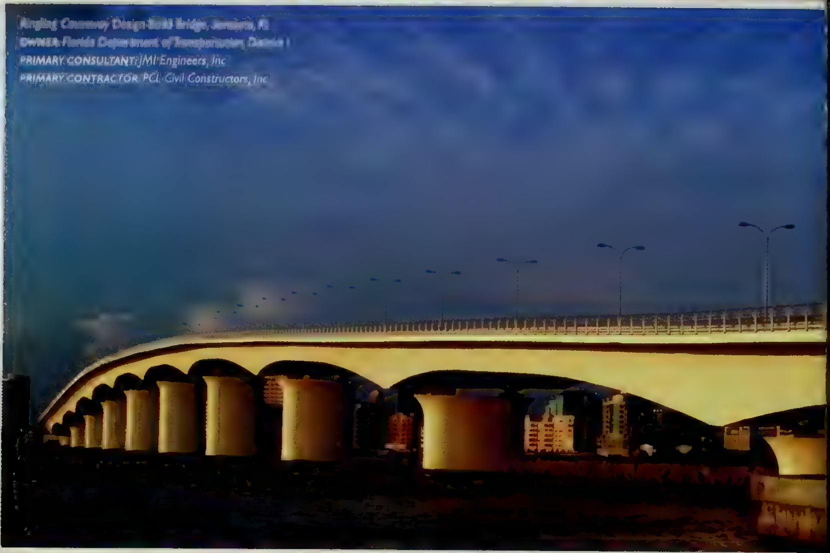
Ringling Causeway Design-Build Bridge, Sarasota, FL
OWNER: Florida Department of Transportation, District 1
PRIMARY CONSULTANT: JMI Engineers, Inc
PRIMARY CONTRACTOR: PCL Civil Constructors, Inc

Denver International Airport, Denver, CO
OWNER: City and County of Denver
PRIMARY CONSULTANT: Fentress Bradburn Architects Ltd.
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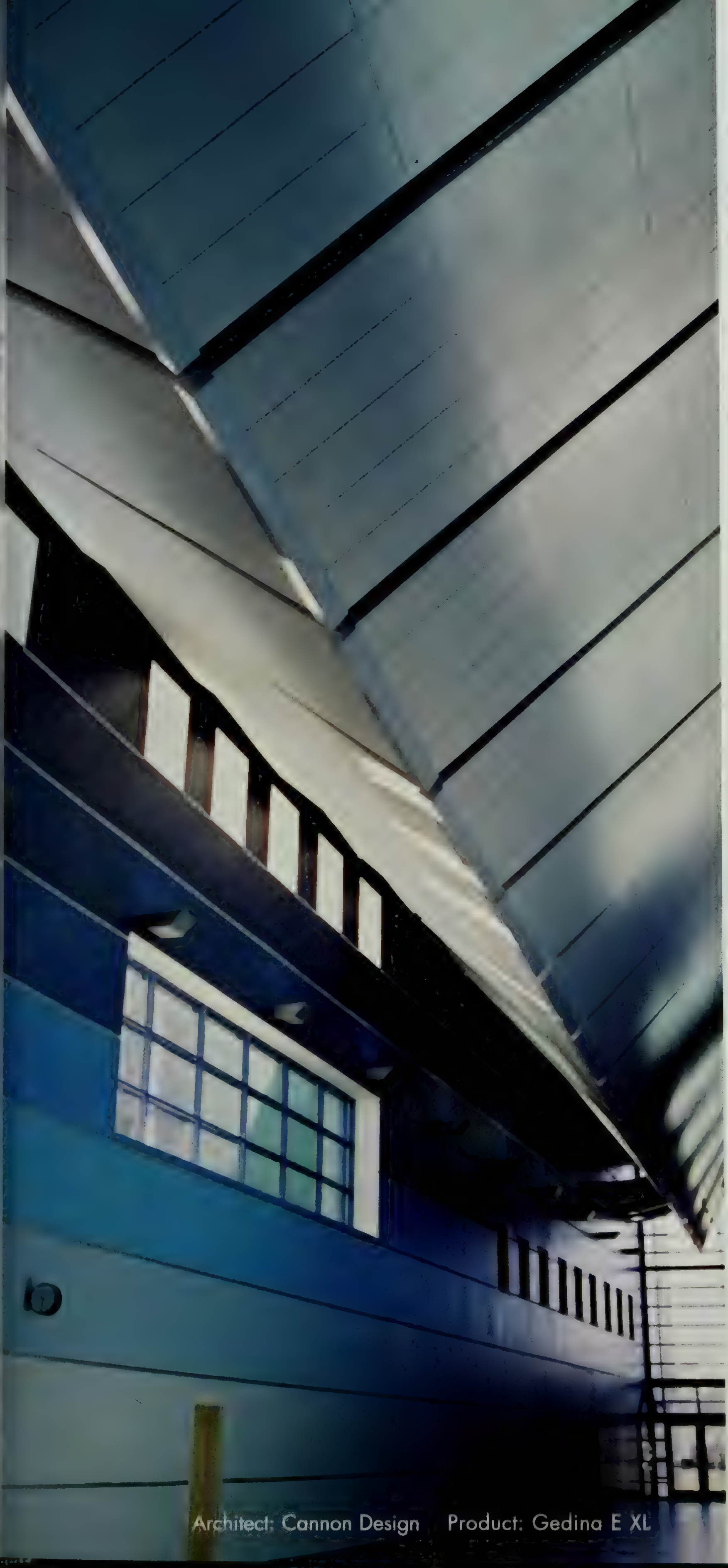

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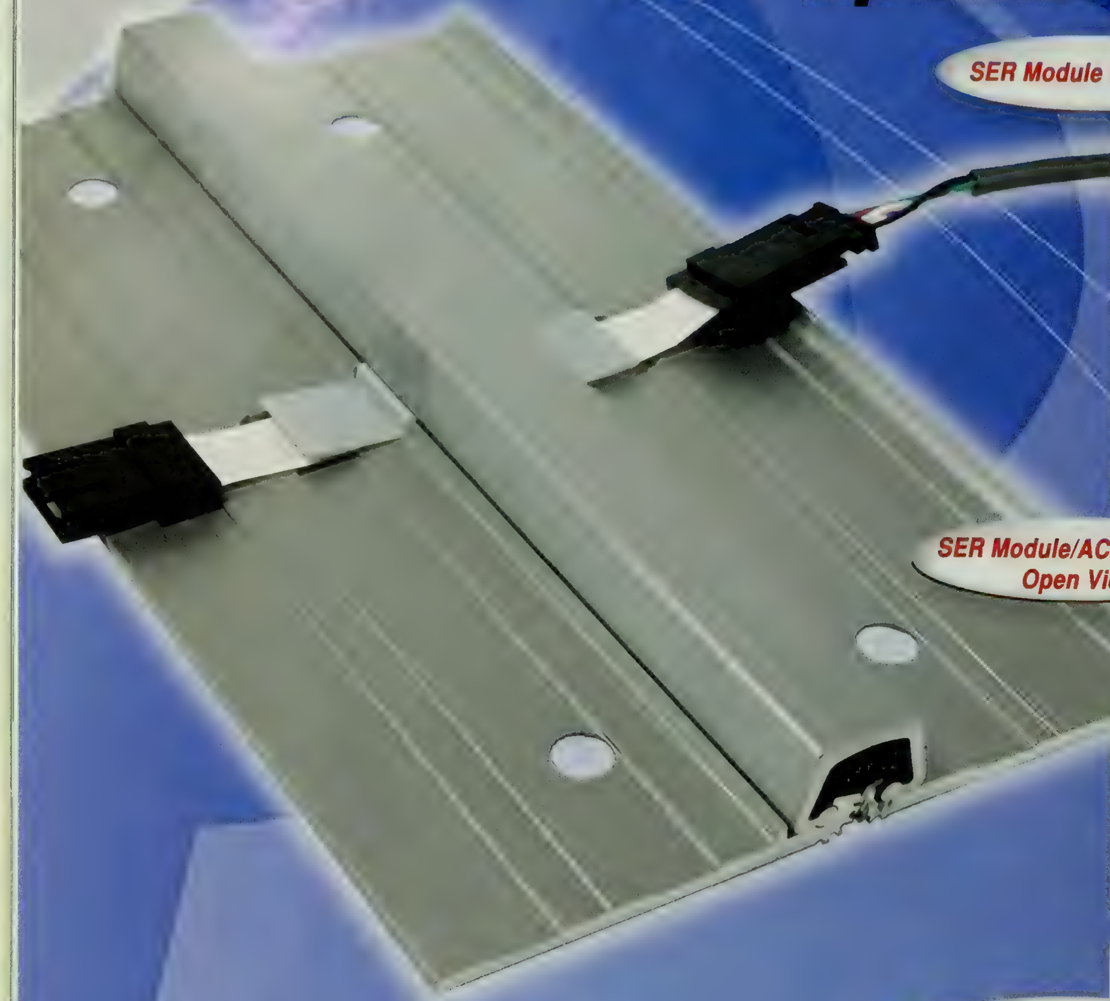

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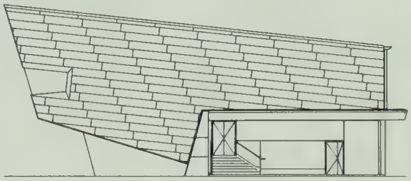

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Stadiums

Let the games begin

AS THEY COMPETE TO HOST SPORTING EVENTS, CITIES ALLOW ARCHITECTS TO FLEX THEIR CREATIVE MUSCLE

By James Murdock

Stadiums and arenas demand bold, even courageous ideas from those who build them. For too long, though, timidity has ruled and these buildings have prompted more raspberries than cheers from architecture fans.

In the United States, at least, a failure of political imagination is often to blame. With privately held sports franchises such as the New York Yankees increasingly unwilling or unable to pay for expensive new facilities, cities are sharing their expenses or offering generous tax breaks—but failing to demand better architecture in return. And team owners, reluctant to jeopardize municipal incentives, stick to tried-and-true designs: big, dumb boxes or twee throwbacks to the days of Babe Ruth (inspired by HOK Sport's highly lauded Camden Yards in Baltimore, which opened in 1992).

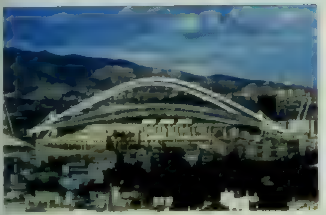
Today's most exciting stadiums and arenas are being built in Europe and Asia, where, fittingly, the competitive spirit spurs innovation. As cities jockey globally for the right to host the Olympic Games and soccer championships, they've learned that exciting architecture can sway decisions in their favor—and that encouraging architects to vie energetically for a commission guarantees fresh ideas.

The projects in this month's Building Types Study illustrate how competition fuels creativity. In Munich, Germany, Herzog & de Meuron—aided by a slew of engineers—stretched the limits of a new material to create an otherworldly curtain wall for their Allianz Arena. In Athens, Santiago Calatrava sculpted an urban landscape, crowned by the Olympic Stadium, that marries theater and engineering. And in designing the Ice Hockey Stadium for Turin, Italy, Arata Isozaki proved that attention to detail and materials can save any box, no matter how big, from banality.

In addition to looks, the stadiums on these pages, and on RECORD's Web site, share convertibility. If necessary, seating sections fold out of the way to make room for a convention hall or concert stage, while retractable roofs and sunshades—made possible with new eco-minded products and technologies—enable efficient, year-round use of outdoor stadiums.

But what of the United States? After years of Camden Yards copycats, some cities are finally dreaming bigger: Chicago has settled into Wood + Zapata's nervy transformation of the historic Soldier Field [RECORD, May 2004, page 114]; Phoenix is nearing completion of Cardinals Stadium, Peter Eisenman's metallic changeling; and San Diego is enjoying Antoine Predock's muscular Padres Ballpark (see www.archrecord.com). Let's hope that they're only the first competitors out of the starting gate. ■

James Murdock is a New York–based writer on architecture and real estate.



1.

Athens, Greece

With a soaring feat of engineering, Santiago Calatrava sculpts a new symbol for an already historic and iconic landscape.

2.

Munich, Germany

Herzog & de Meuron stretch, inflate, and illuminate ETFE foil to create a stadium curtain wall that floats and pulses like a jellyfish.

3.

Turin, Italy

Attention to detail, such as an ovoid pattern stamped on stainless-steel facade panels, makes all the difference in Arata Isozaki's arena.

For more information on these projects, go to Building Types Study at **www.archrecord.com**.

Olympic Stadium
Athens, Greece

1

SANTIAGO CALATRAVA MAKES A GIGANTIC STRUCTURE SEEM WEIGHTLESS AND CREATES A TELEGENIC NATIONAL SYMBOL IN THE PROCESS.

By Sam Lubell and Joann Gonchar, AIA

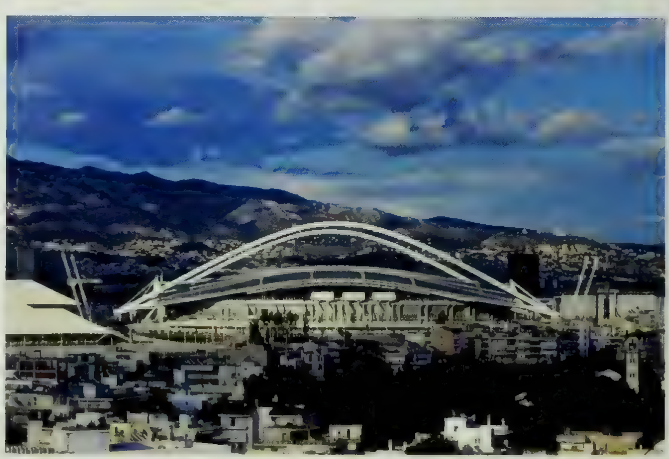
Architect/Engineer: *Santiago Calatrava, FAIA*
Client: *Ministry of Culture, Greece*
Consultant: *Topiodomi (landscape)*
General contractor: *Elliniki Technodomiki/AKTOR*

Size: *1.374 million square feet*
Cost: *$350 million*
Completion date: *July 2004*

Sources
Steel: *Construczione Cimolai Armando S.p.A.*
Roof glazing: *Palram Polycarb/ GALLOP*
Field turf: *Greentech*
Lighting: *Phillips lighting*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

With about 3.9 billion people watching the 2004 Athens Olympic Games, the Olympic Stadium was, for two weeks in August, likely the most widely televised building in the world. The global exposure gave Greece, host of the first modern Olympic Games in 1896, and a country that has experienced new political stability and increasing prosperity in recent decades, a chance to demonstrate its growing prominence in Europe. Therefore, the stadium needed to serve as a dynamic symbol, not only for the games, but for Greece as a whole.



Program

The Greek Ministry of Culture chose Spanish architect Santiago Calatrava, FAIA, who has designed innovative, Olympic-size projects, such as the City of Arts and Sciences in Valencia, the Milwaukee Art Museum, and countless elegant bridges, as the stadium's architect. His assignment was to transform—with the addition of a roof—a fairly conventional 75,000-seat open-air stadium built in 1979. The new roof was to provide shading and a signature element visible miles away. In addition to being the site of the lavish opening and closing ceremonies, the stadium hosted track and field events and soccer games.

Besides designing the $350 million main stadium, Calatrava was in charge of unifying and reorganizing the surrounding 250-acre Olympic Sports Complex, which already contained some sports facilities. Although Athens was selected as host city in 1997, political, legal, and bureaucratic obstacles prevented award of the design contract until October 2001, leaving less than three years to design and build the complex.

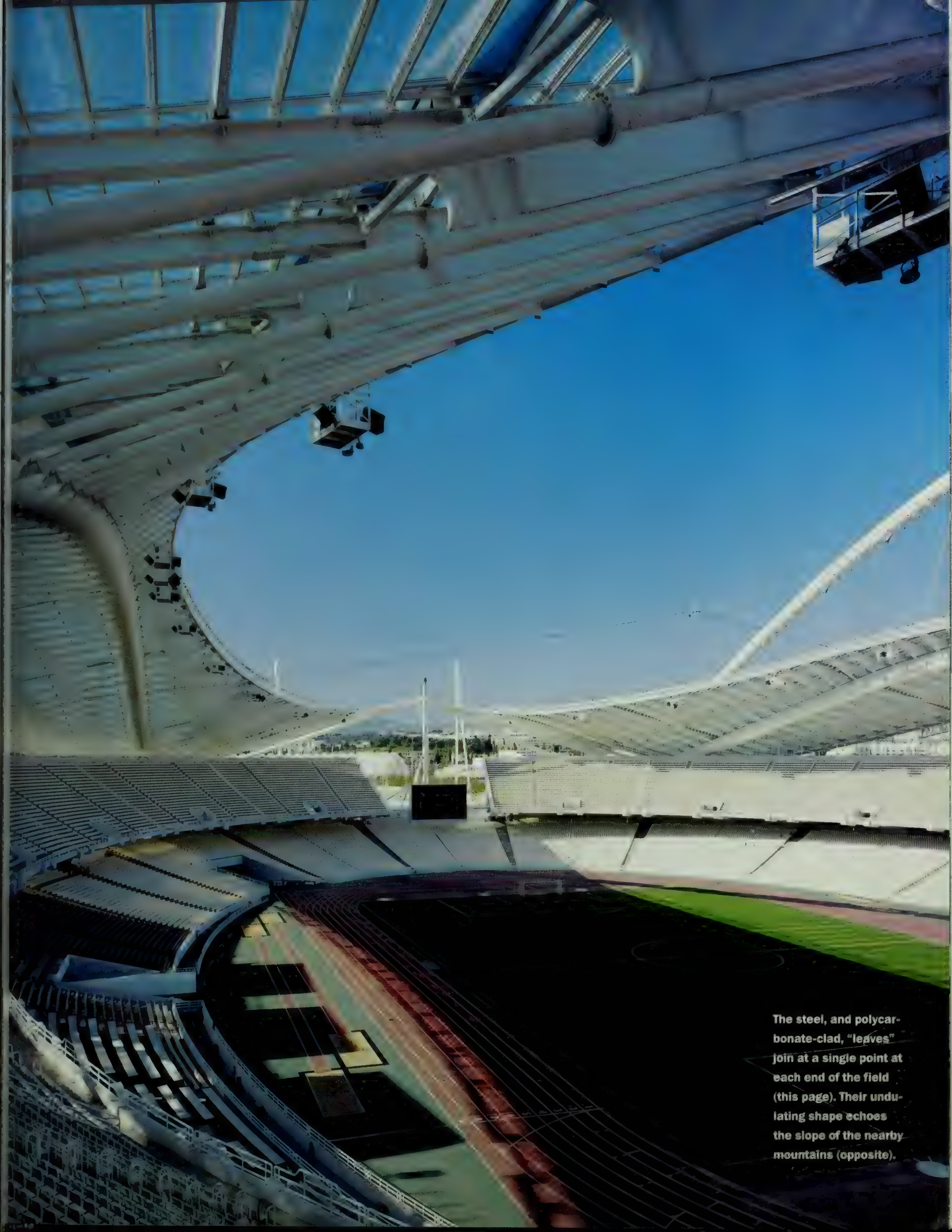
Solution

Calatrava saw his main role as that of urban planner. "It is a small city—a city of sports," he says of the complex, located in Marousi, a northern suburb of Athens. To give the site cohesion, he established a central pedestrian route linking the stadium and an existing velodrome, for which he also designed a new roof. He also created a Plaza of Nations, a curved, amphitheaterlike gathering place; the Agora, a modular, light-steel-vaulted structure defining the plaza's northern perimeter; the Wall of Nations, an 856-foot-long kinetic screen; as well as entrance canopies, pools, and tree-lined walkways.

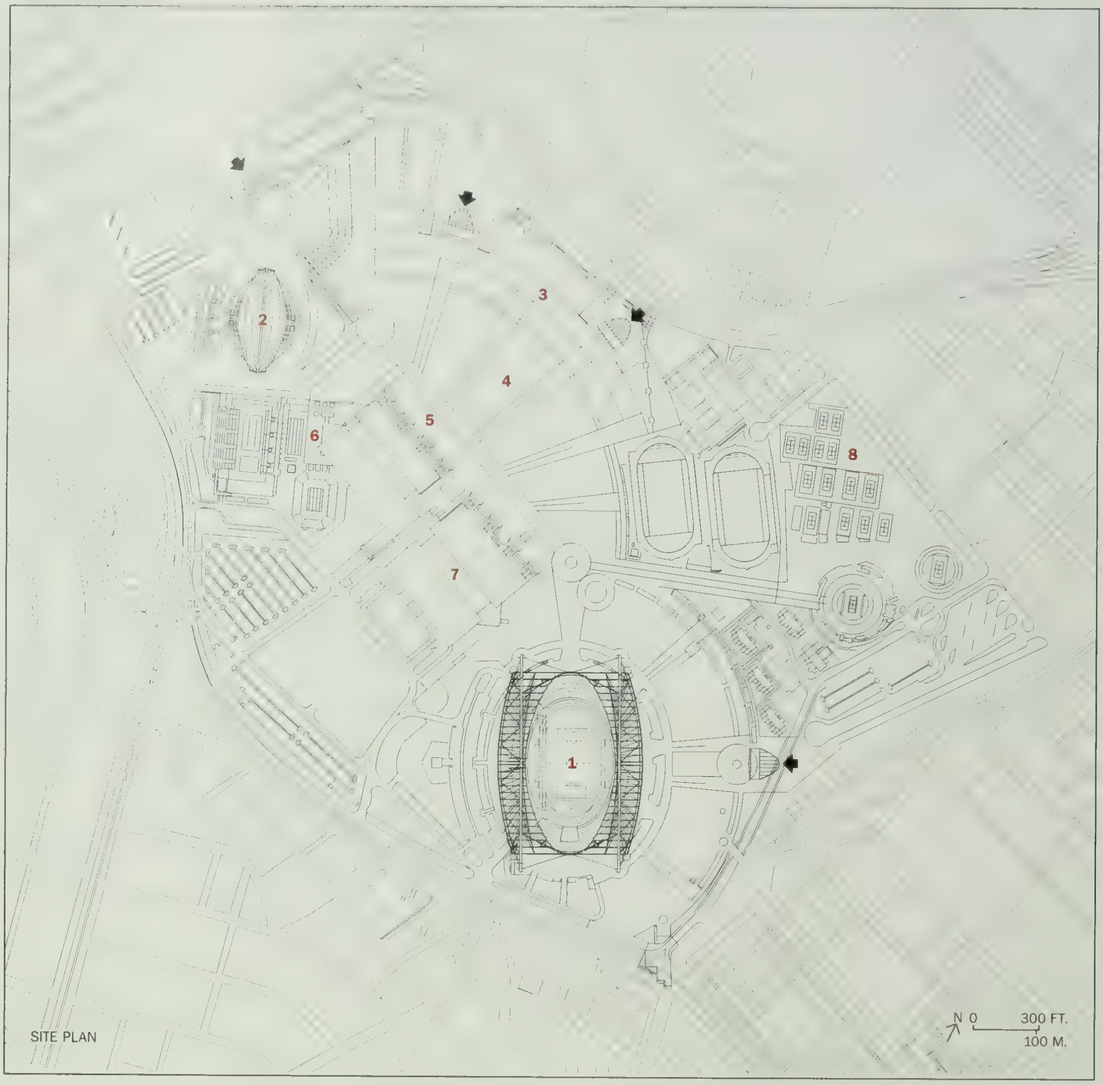
The stadium roof is this composition's most striking element. Calatrava topped the stadium with a pair of 997-foot-long steel, and polycarbonate-clad, "leaves," which join at a single point at each end of the field. Each leaf is composed of a 236-foot-tall arch attached by cables to a lower torque tube, which in turn supports a series of transverse ribs. The new structure touches the ground at only four points—at massive "shoes," more than 21 feet tall and 36 feet long, where the upper arch and torque tube merge.

The contractors assembled the roof in halves directly to the east and west of the stadium and then used horizontal jacks to slide each leaf about 200 feet over the seating bowl on stainless-steel tracks [see story on page 258].

According to Calatrava, the

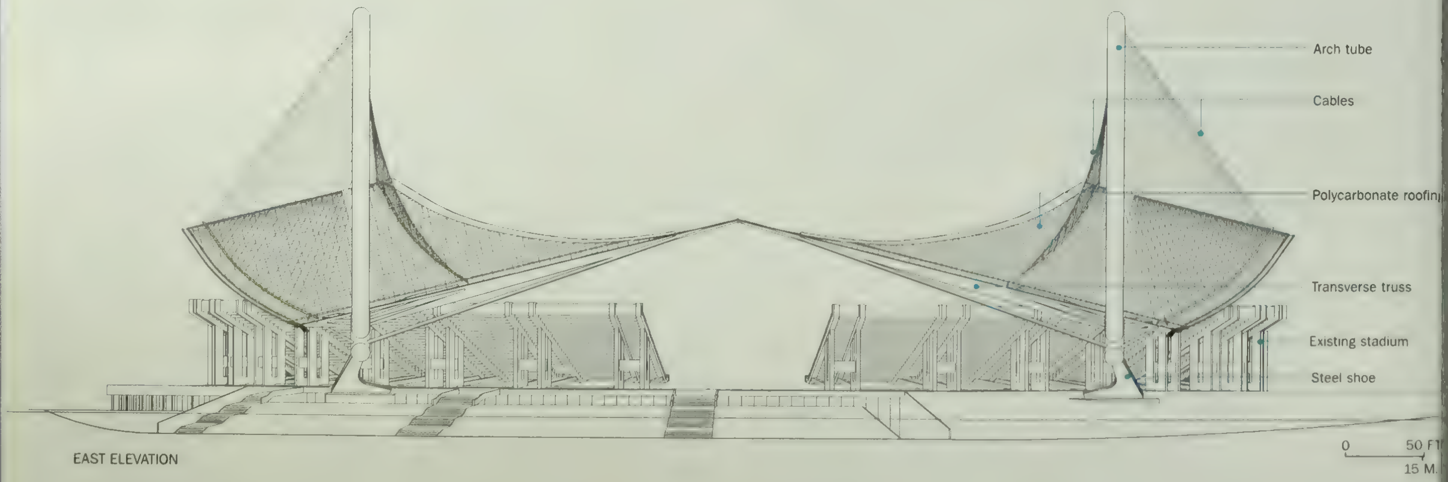


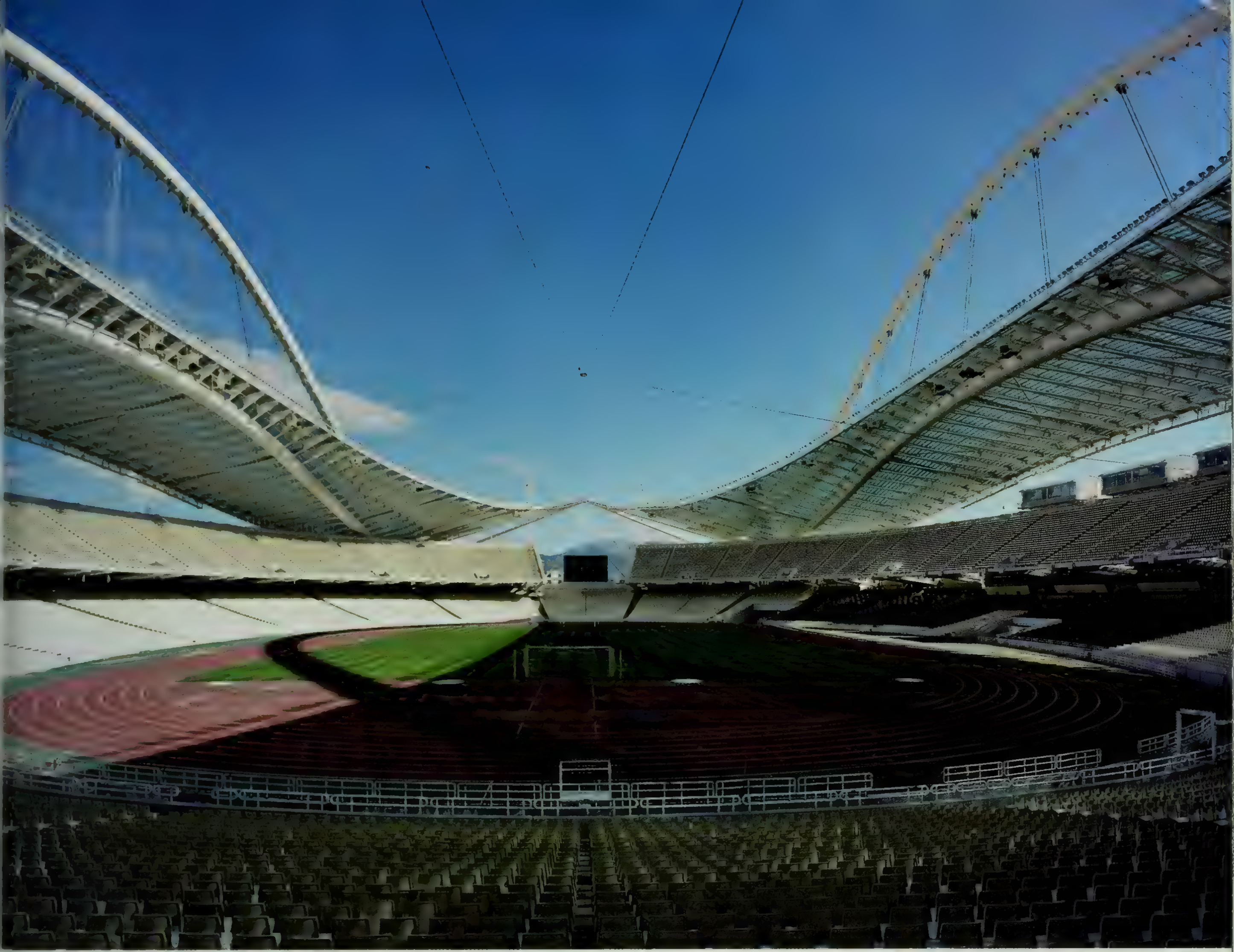
The steel, and polycarbonate-clad, "leaves" join at a single point at each end of the field (this page). Their undulating shape echoes the slope of the nearby mountains (opposite).



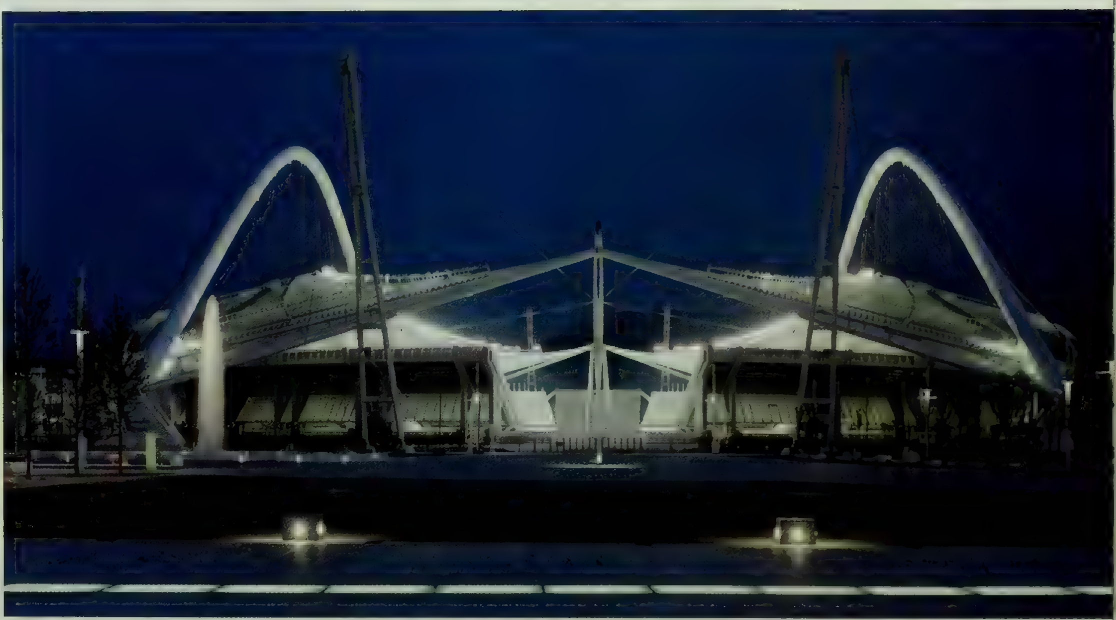
1. *Olympic Stadium*
2. *Velodrome*
3. *Agora*
4. *Plaza of Nations*
5. *Wall of Nations*
6. *Aquatics center*
7. *Indoor sports center*
8. *Tennis center*

Calatrava master planned the Olympic Sports Complex and designed the stadium and velodrome roofs; the Plaza of Nations, an amphitheaterlike gathering space; the Wall of Nations, a kinetic sculpture; and the Agora, an arch-covered walkway.

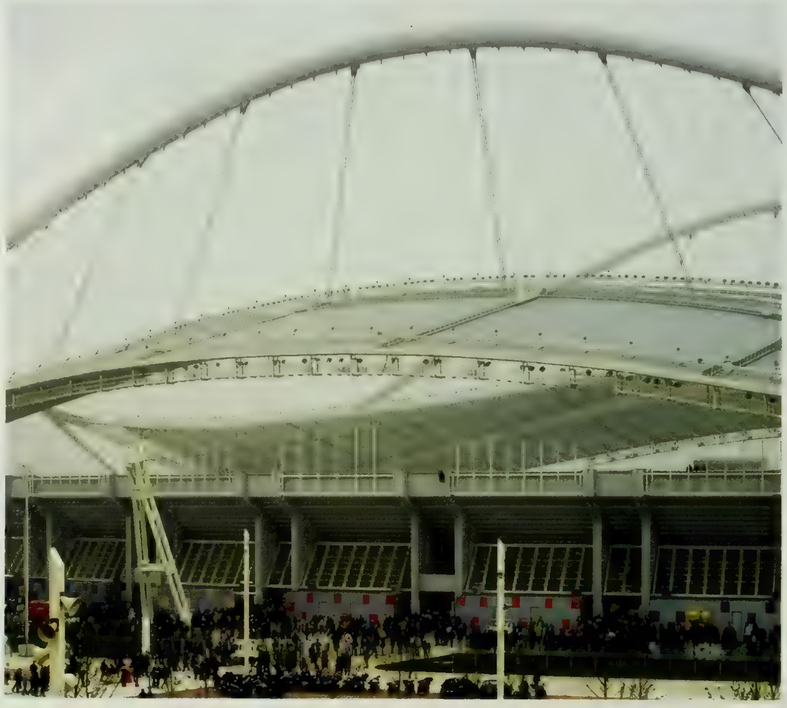


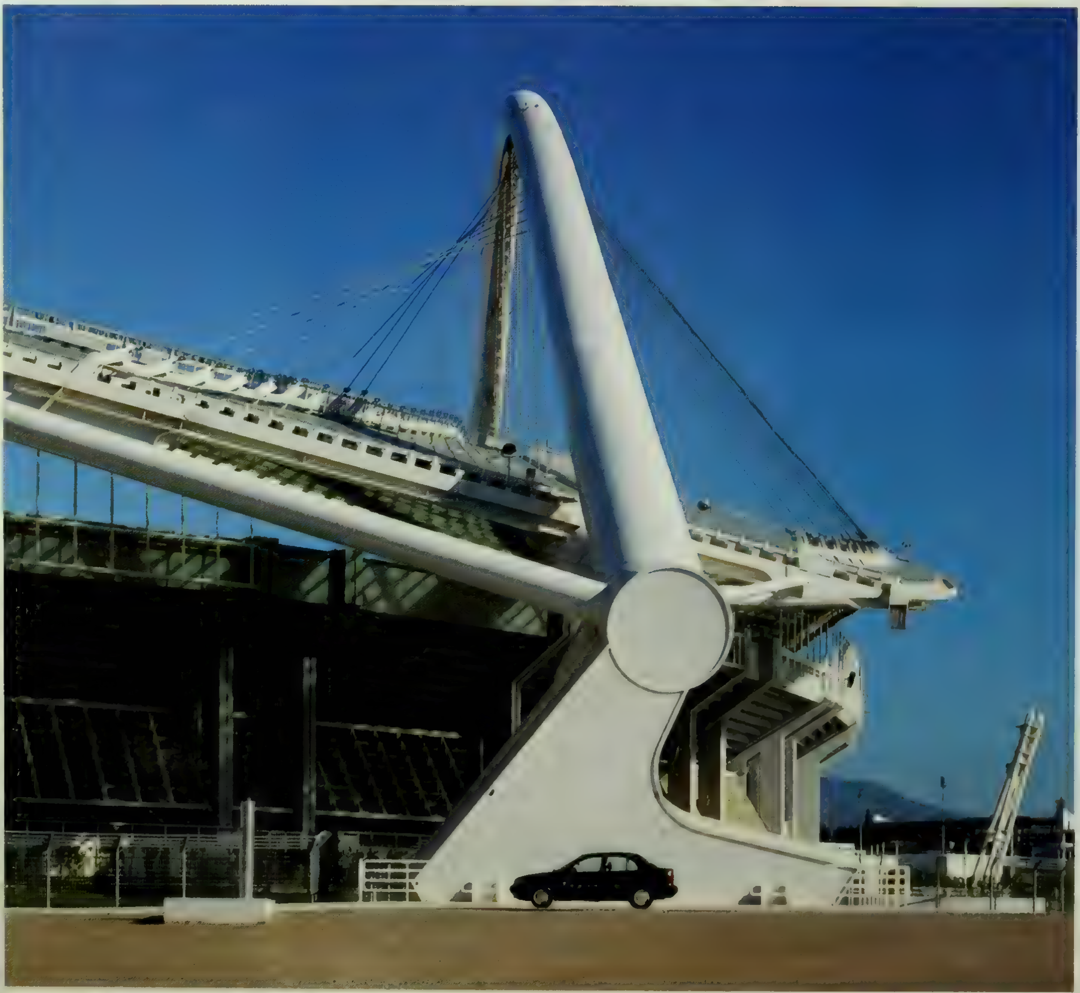


The new winglike roofs (above) partially shade the field and spectators, a necessity in Athens, where daytime summer temperatures often reach above 100 degrees. Dramatic lighting makes the stadium glow from within at night (right). Its upper arches can be seen from miles away. Local residents refer to the stadium as "The Calatrava."



The roof leaves (right), similar in structure to one of Calatrava's bridges, are supported via massive "shoes" (below), more than 21 feet tall and 36 feet long, where the upper arch and torque tube merge.





roof's form is intended to evoke the arches and vaults of Greek Byzantine architecture, often overlooked in favor of the "overused" Classical Greek vocabulary of columns, architraves, and pediments. He also wanted the style to be contemporary, and found an appropriate precedent in his own Campo Volantin pedestrian bridge in Bilbao, Spain, a swooping, high-arched suspension structure that spans the Nervión River.

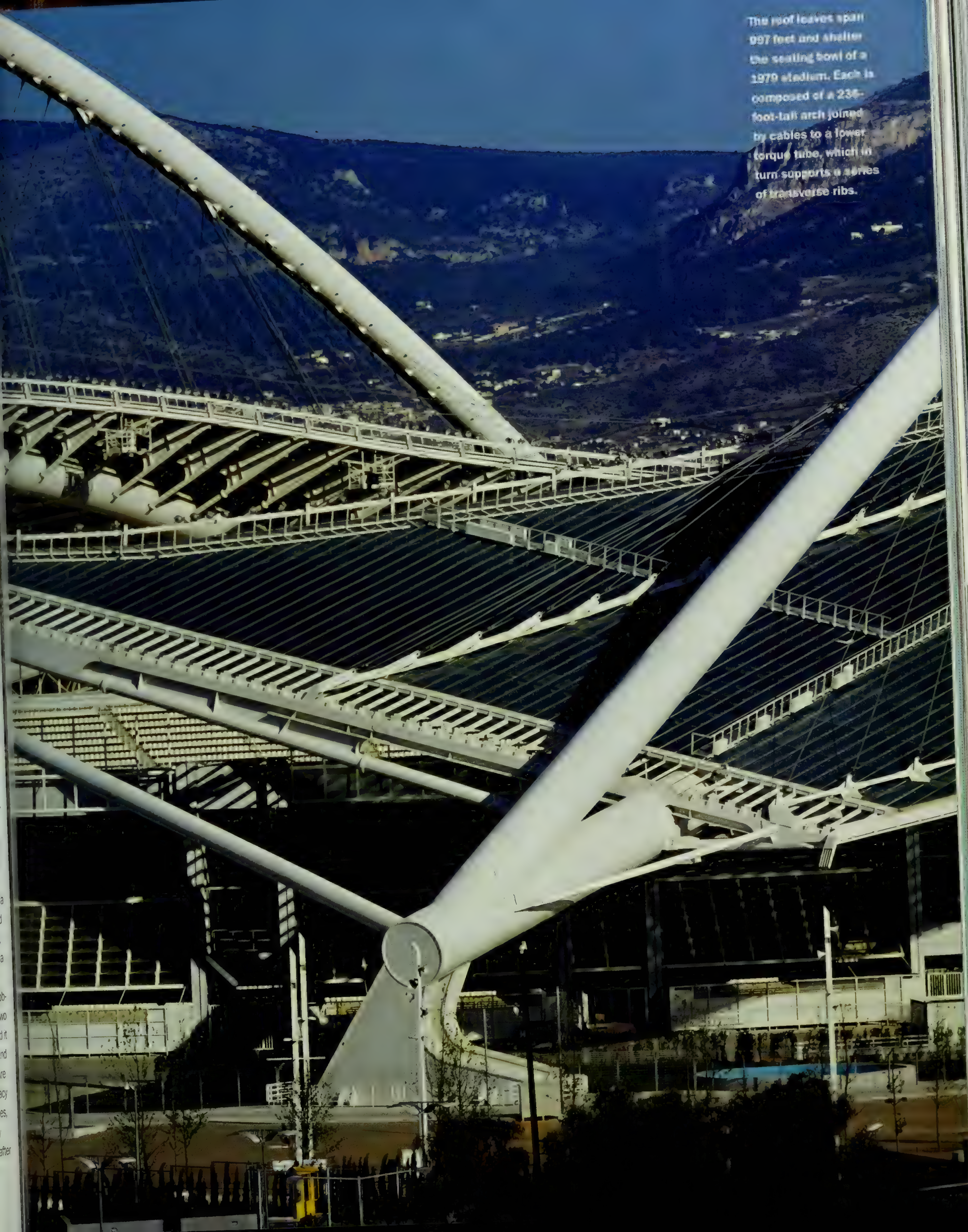
Commentary

For anyone who attended the 2004 Olympic Games or followed them on television, it was apparent that the stadium not only satisfied practical requirements, but also played a starring role. Photos and videos of events frequently used the elegant arches of "The Calatrava," as the stadium became known, as a vibrant backdrop. Although the stadium's roof is immense—it covers 250,000 square feet and weighs 20,000 tons—the structure is graceful. It is endowed with a lightness that even survived a design change increasing the diameters of arch and torque tubes to enhance buckling resistance.

Although the roof is stationary, the limited number of points where it meets the ground create the impression that it floats and has the ability to move. This quality was inspired, says Calatrava, by the undulation of the nearby mountains and by the agility of an athlete in motion.

In the months before the games, the pace of construction on the stadium spurred dire predictions from the press that it would not be ready. But contractors finished just in time, building the complicated roof in only a year and a half. They slid the second half of the roof into place on June 4, 2004, and completed construction a few weeks later.

The stadium's only notable problem is that it is now underutilized. Two Greek soccer teams play there, and it will be the site of the 2006 Track and Field World Cup, but such events are limited. Unfortunately, this is a legacy Athens shares with many host cities, which often neglect to adequately plan in advance for facilities' use after the Olympics are over. ■



The roof leaves span 997 feet and shelter the seating bowl of a 1979 stadium. Each is composed of a 236-foot-tall arch joined by cables to a lower torque tube, which in turn supports a series of transverse ribs.

Allianz Arena

Munich, Germany

2

HERZOG & DE MEURON'S CUSHIONY CHAMELEON GLOWS WITH RIVAL TEAMS' COLORS.

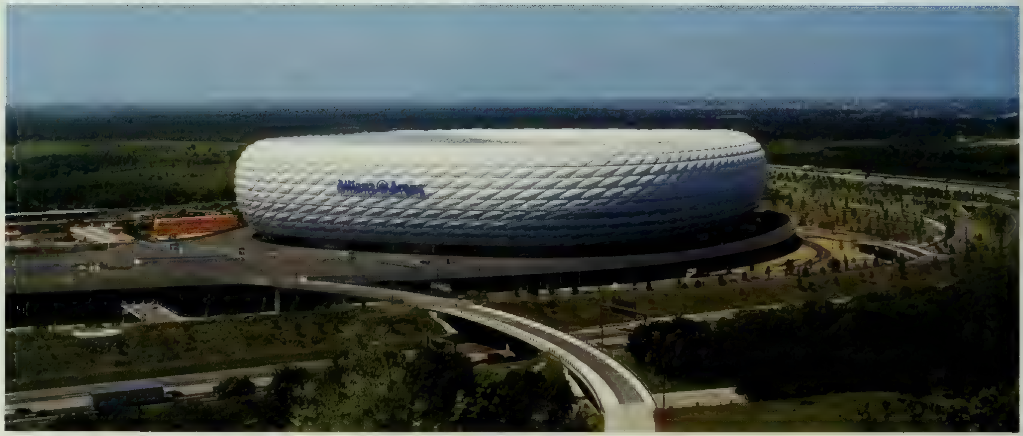
By Tracy Metz

Architect: *Herzog & de Meuron—Jacques Herzog, Pierre de Meuron, Harry Gugger, Robert Hösl, Tim Hupe, Martin Fröhlich, Nikolai Happ, Christoph Röttinger*
Client: *Allianz Arena - München Stadion GmbH*
Consultants: *Arup, Sailer Stepan Partner, Kling Consult, Walter Mory Maier, IB Haringer (structural engineers); R+R Fuchs (facade); Werning Tropp Schmidt (lighting); Vogt (landscape)*
General contractor: *Alpine Bau*

Size: *404,723 square feet*
Cost: *$360 million*
Completion date: *May 2005*

Sources
Ethylenetetrafluoroethylene (ETFE) foil: *Asahi Glass*
Metal spring fitting for skin: *Covertex*
Sheet-metal drainage installation: *Geberit (Pluvia)*
Membrane lighting: *Siteco*
Concrete block: *Xella*

For more information on this project, go to Building Types Study at **www.archrecord.com**.



Architect Jacques Herzog has called soccer public opera on a grand scale. Surely that makes the Allianz Arena, which he and Pierre de Meuron designed for the city of Munich, a stage on which high drama unfolds. Its nickname, "Ring of Fire," has an epic quality reminiscent of Wagner or Tolkien—and, just like Alberich's or Frodo's ring, the stadium is so luminous, tactile, and enchanting, one can hardly resist reaching out to touch it.

Program

In the fall of 2001, Munich residents voted enthusiastically to have the arena built—to the tune of $360 million for 66,000 seats—as a new home for the city's two rival soccer teams, the Bayern and the 1860s. The stadium is meant to serve not only as a sports venue but also as a commercially viable "geschäftshaus" (business center). It contains 106 skyboxes that businesses rent for $100,000 to $300,000 a year.

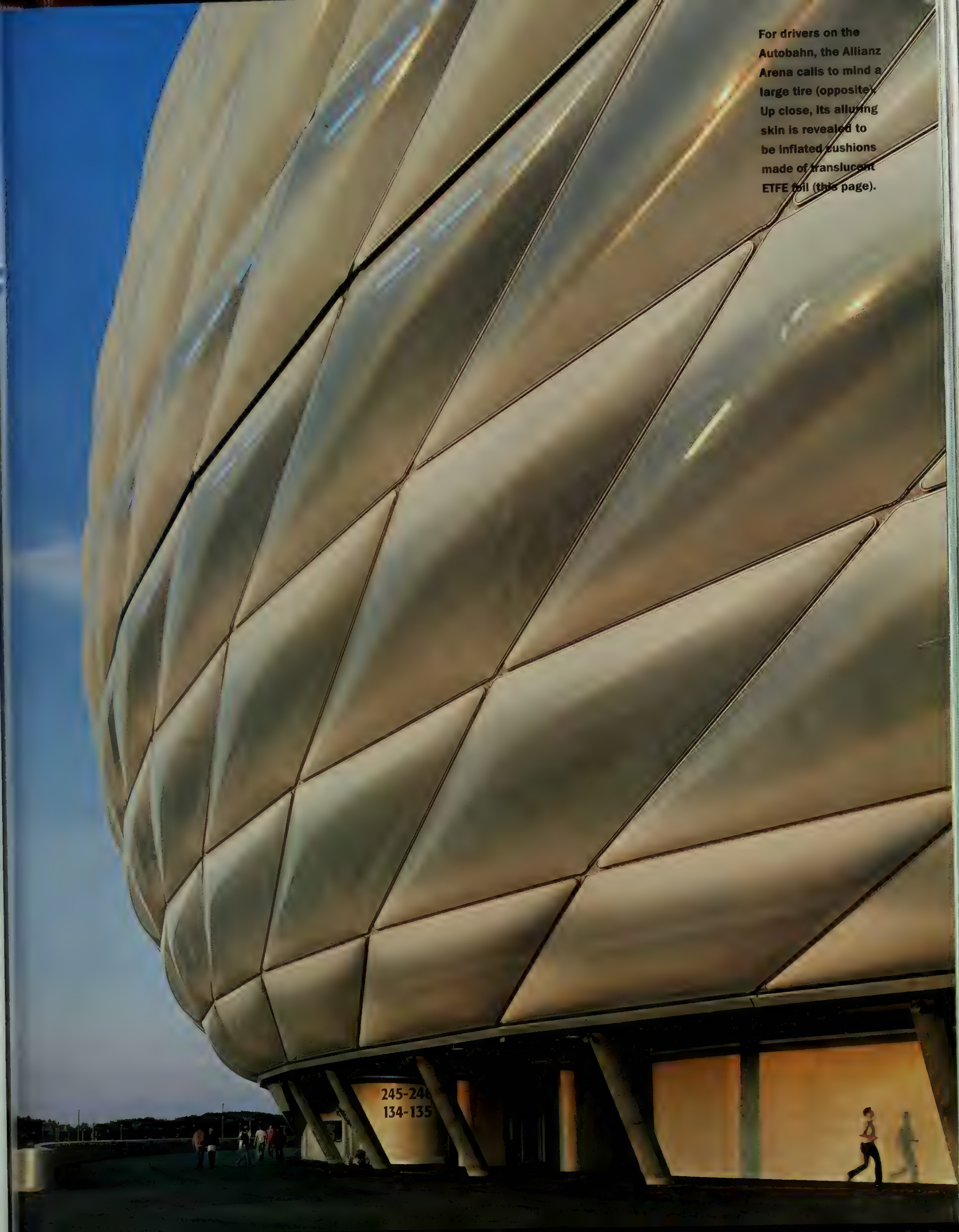
Solution

Despite its international stature, Herzog & de Meuron entered the competition for the design with Alpine Bau, a German construction firm. This move linked the fate of the firm's scheme to the contractor's ability not only to build the arena, but Alpine's skill at convincing the city and soccer teams that it could be built at all—something that was not immediately apparent, given the building's oval shape (in which almost no two cross sections are the same), its cantilevered steel roof, and its novel skin.

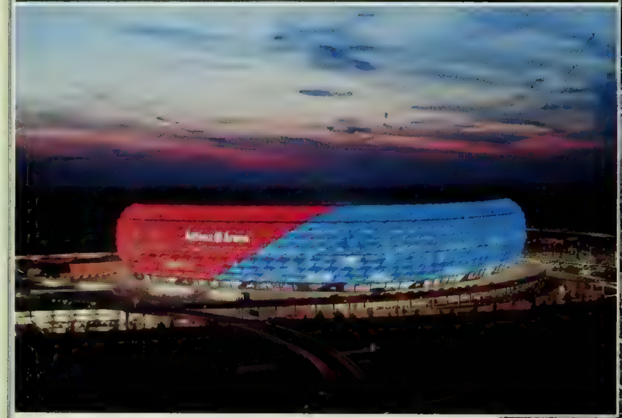
Herzog has said that the arena's rounded contours were intended to soften the aggression that so often accompanies soccer matches. From a distance, the building's skin resembles blown glass, reminiscent of Herzog & de Meuron's Prada store in Tokyo. But up close, the arena reveals itself to be covered in plastic cushions made of ethylenetetrafluoroethylene (ETFE) foil a mere 0.2 millimeters thick, inflated by a constant stream of warm air. No two of the 2,784 diamond-shaped cushions are alike—each fits in one spot and one spot only, a feat of mass customization made possible thanks to computer modeling—and their installation required the talents of 35 mountain climbers.

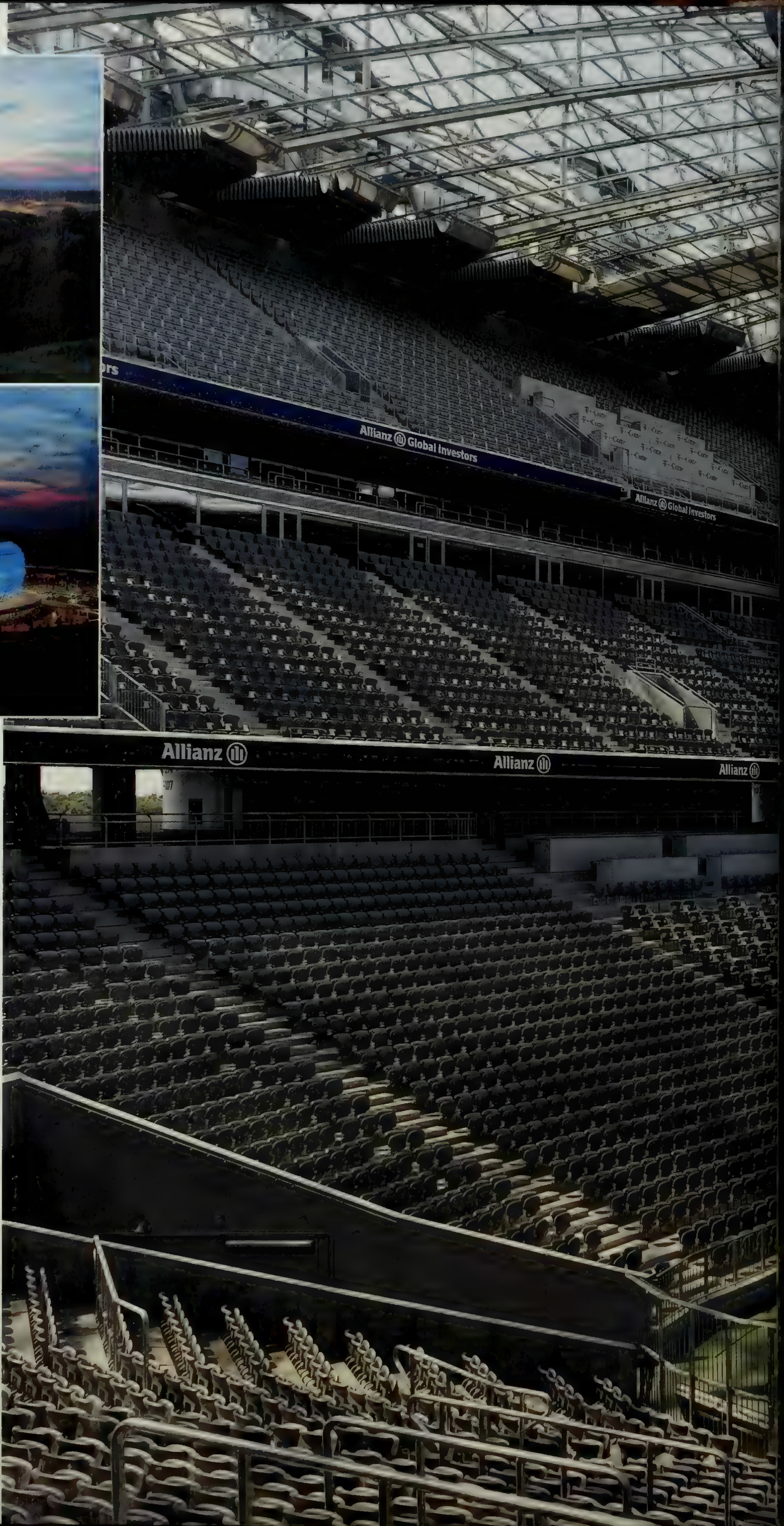
The cushions are illuminated by 5,344 lamps. On game nights, depending on which team is playing, the entire building glows: red for the Bayern, blue for the 1860s—and sometimes white, when the arena hosts Germany's national squad. All

Tracy Metz, an international correspondent for RECORD, *lives in Holland.*



For drivers on the Autobahn, the Allianz Arena calls to mind a large tire (opposite). Up close, its alluring skin is revealed to be inflated cushions made of translucent ETFE foil (this page).

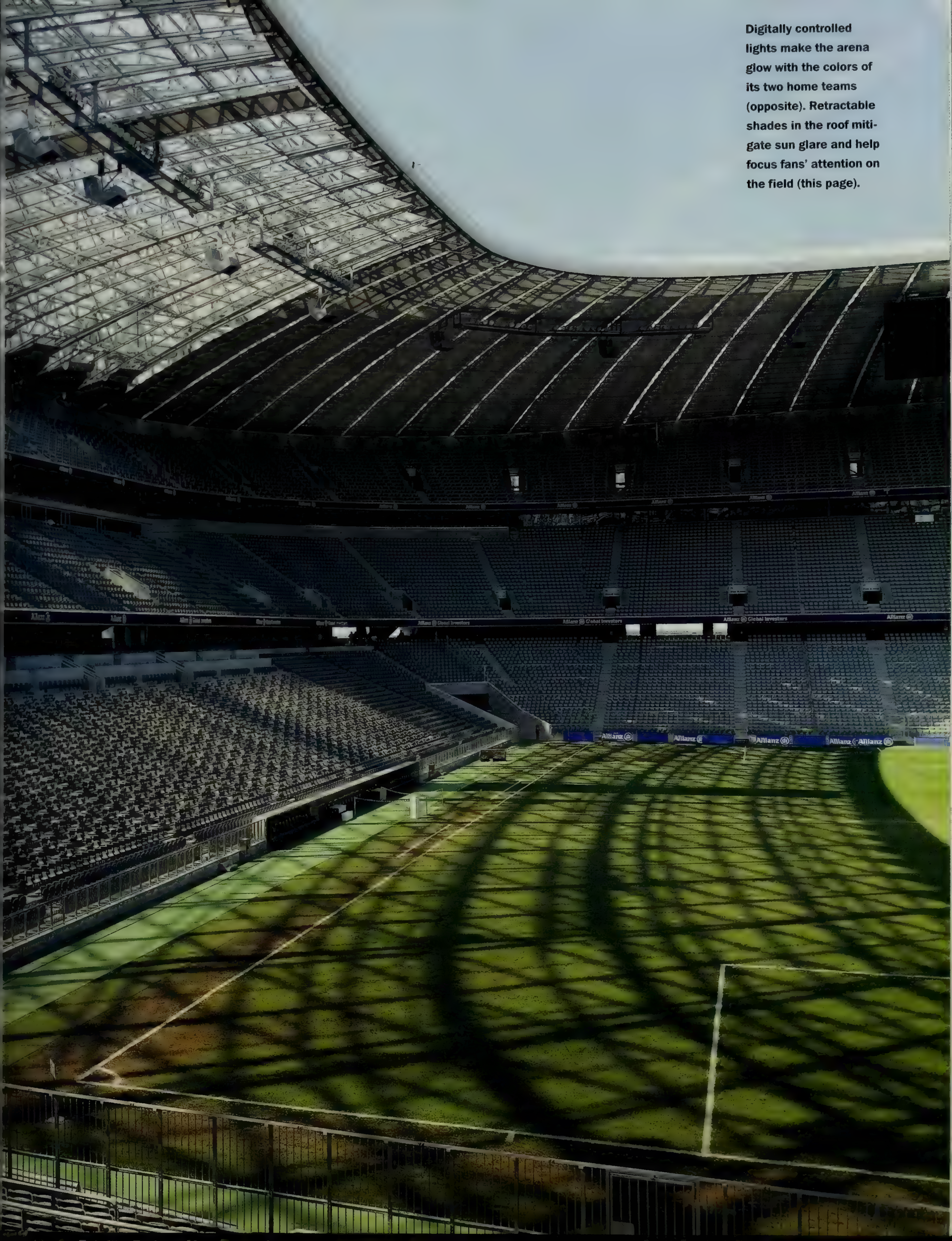




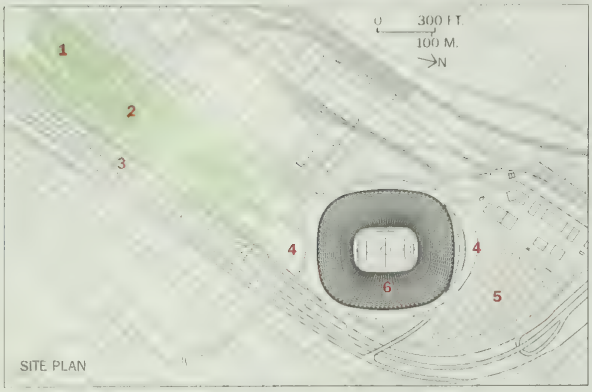
other evenings, it alternates between the colors on half-hour intervals. Public areas in the interior are silver paint on concrete, and even the plastic molded seats are silver: a color scheme neutral enough to satisfy the different groups of fans.

The arena's glowing skin of ETFE foil cushions is anchored by a steel framework that is itself cantilevered from a series of steeply pitched precast-spun-concrete columns, which account for the building's curving shape. The facade, then, is independent of the structure, giving it an extraordinary lightness.

The steel roof, built to bear a load of nearly 5 feet of snow, is hidden from view during matches by retractable textile strips and sunshades. This is part of Herzog's strategy to prevent vandalism by heightening concentration on the game, as is the increasing steepness of the incline of the three seating rings from bottom to top. Spectators sit close to the playing field, separated by a distance of just 230 feet in the top stands and a mere 26 feet at

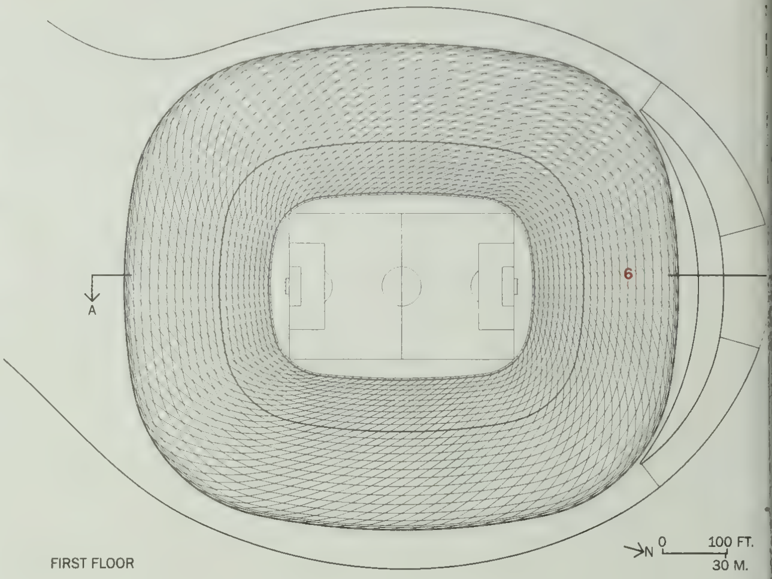


Digitally controlled lights make the arena glow with the colors of its two home teams (opposite). Retractable shades in the roof mitigate sun glare and help focus fans' attention on the field (this page).

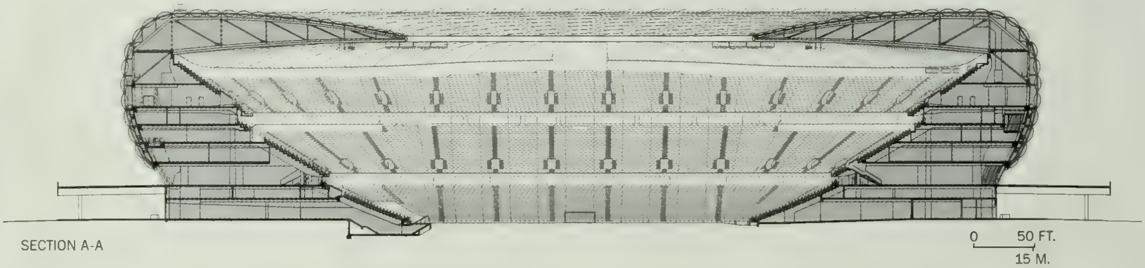


SITE PLAN

1. *Esplanade*
2. *Light well*
3. *Access to underground parking*
4. *Entrance barrier*
5. *Bus parking*
6. *Arena*



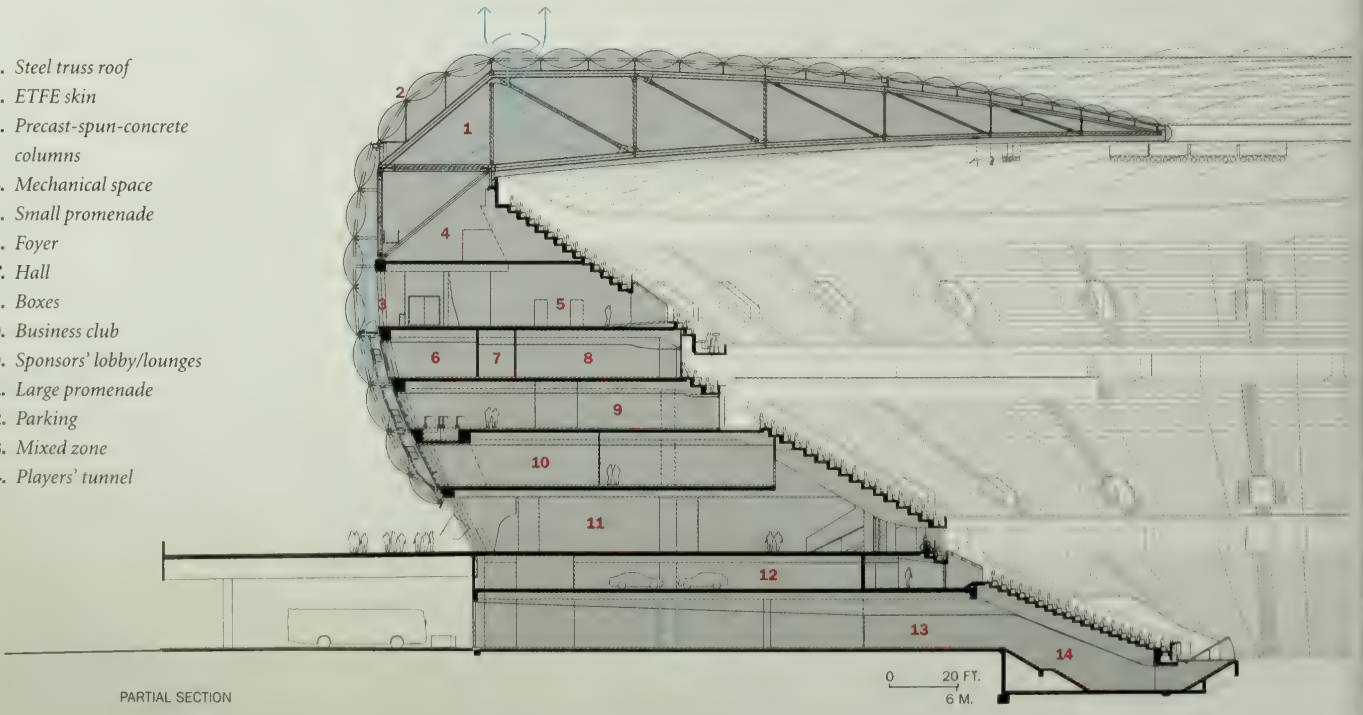
FIRST FLOOR



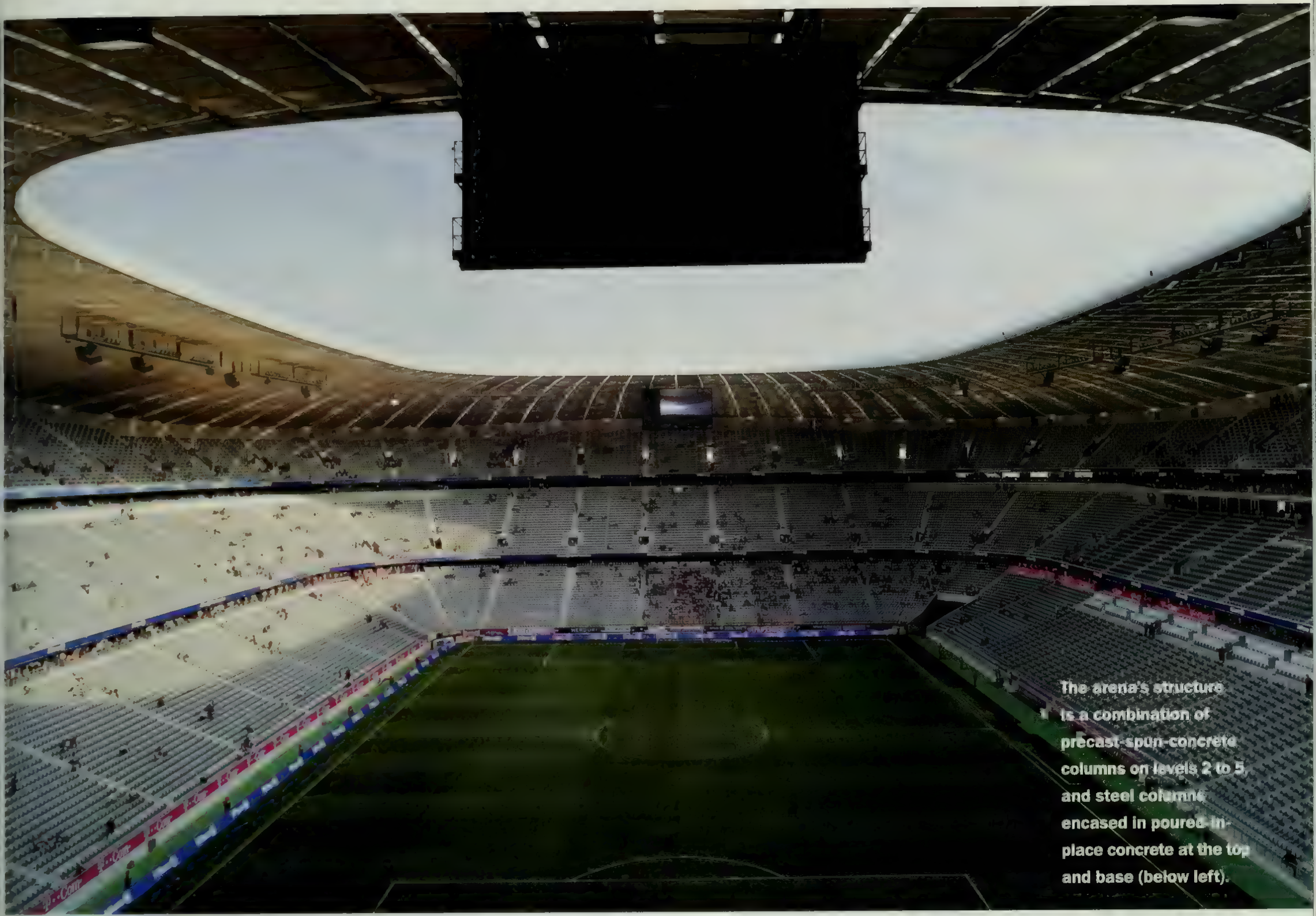
SECTION A-A

Spectators approach the arena from asphalt paths on a grassy esplanade that covers underground parking (site plan, above) contained in a poured-concrete base.

1. *Steel truss roof*
2. *ETFE skin*
3. *Precast-spun-concrete columns*
4. *Mechanical space*
5. *Small promenade*
6. *Foyer*
7. *Hall*
8. *Boxes*
9. *Business club*
10. *Sponsors' lobby/lounges*
11. *Large promenade*
12. *Parking*
13. *Mixed zone*
14. *Players' tunnel*



PARTIAL SECTION



The arena's structure is a combination of precast-spun-concrete columns on levels 2 to 5, and steel columns encased in poured-in-place concrete at the top and base (below left).

pitch level, and they have an unimpeded view of both the game and a massive wall of video screens.

Herzog & de Meuron designed the arena's approach as a public procession, befitting a stage of high drama. An underground parking garage, containing spaces for 9,800 cars and 350 buses (making it the largest in Europe), serves as a podium: an artificial grassy hill to heighten the procession. Exiting the garage, crowds mix with people coming from a nearby train station, then wend their way along meandering asphalt paths toward their destination—a stream of devotees coming together in this most contemporary of urban monuments to witness an ancient ritual of combat.

Commentary

Since the Allianz Arena opened in 2005, Munich residents have embraced it as a symbol of their city, a sentiment reflected by T-shirts that read "65.999 und ich," a reference to the number of seats. The arena's proudest moment will surely come this month, when it hosts the opening game of the 2006 FIFA World Cup Championship.

For passersby, especially those traveling on the highway between Munich and Nuremberg, the building resembles nothing so much as an oversize lifesaver, or a tire that rolled off a larger-than-life truck. But no matter what associations its novel shape and skin bring to mind, the Allianz Arena is an exemplar of the sports venue as the new iconic civic architecture. This Ring of Fire is not cursed in the least—the Rhine maidens, and maidens of Munich's River Isar, can sleep peacefully. ■

Ice Hockey Stadium
Turin, Italy

3

ARATA ISOZAKI'S ICE HOCKEY STADIUM IN TURIN PROMOTES FLEXIBILITY AND URBAN REGENERATION WITH AN ETHEREAL DESIGN.

By Paul Bennett

Architect: *Arata Isozaki & Associates—Arata Isozaki, principal; Andrea Maffei, Stefano Tozzi, Hidenari Arai, Hiroshi Yoshino, Takeski Miura, Yoshitoki Iijima, Norimitsu Sukeshima, Claudia Tinivella, Wataru Ishikawa, Shinobu Hashimoto, Marco Folke Testa, Yuzaburou Hori, Kazunori Yokotsuka, design team*
Associate architect: *ArchA*
Client: *Agenzia Torino 2006*
Engineer/consultants: *Arup (structural, m/e/p, fire, acoustics, lighting, communications)*

Size: *462,332 square feet*
Cost: *$115.5 million*
Completion date: *December 2005*

Sources
Glass facade: *Lorenzon Techmec System SpA*
Concrete: *Italcementi*
Formwork: *PERI SpA*
Polymer seats: *DuraStar*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

Turin, Italy, was ecstatic on being selected host city for the 2006 Winter Olympic Games—until it realized that the only place to hold this event was in a forgotten industrial zone on the southwest edge of town. Although a few interesting remnants of 1930s-era Fascist architecture littered the site, including a municipal stadium and the Torre Maratona, a 147-foot-high Art Deco tower built to signal the stadium, it was mainly a no-man's-land—hardly a place to accommodate and thrill large crowds, or advertise Turin to the world.

Program

Arata Isozaki won the competition to redesign the entire 43-acre area, including the construction of a new 15,000-seat ice hockey arena, a landscaped plaza, and, initially, the renovation of the existing municipal stadium to serve as a venue for opening and closing ceremonies. This element was later farmed out to an Italian contractor. The Olympics committee wanted something eye-catching and identifiable for the games, while the city needed a building that could easily adapt to different uses in the future.

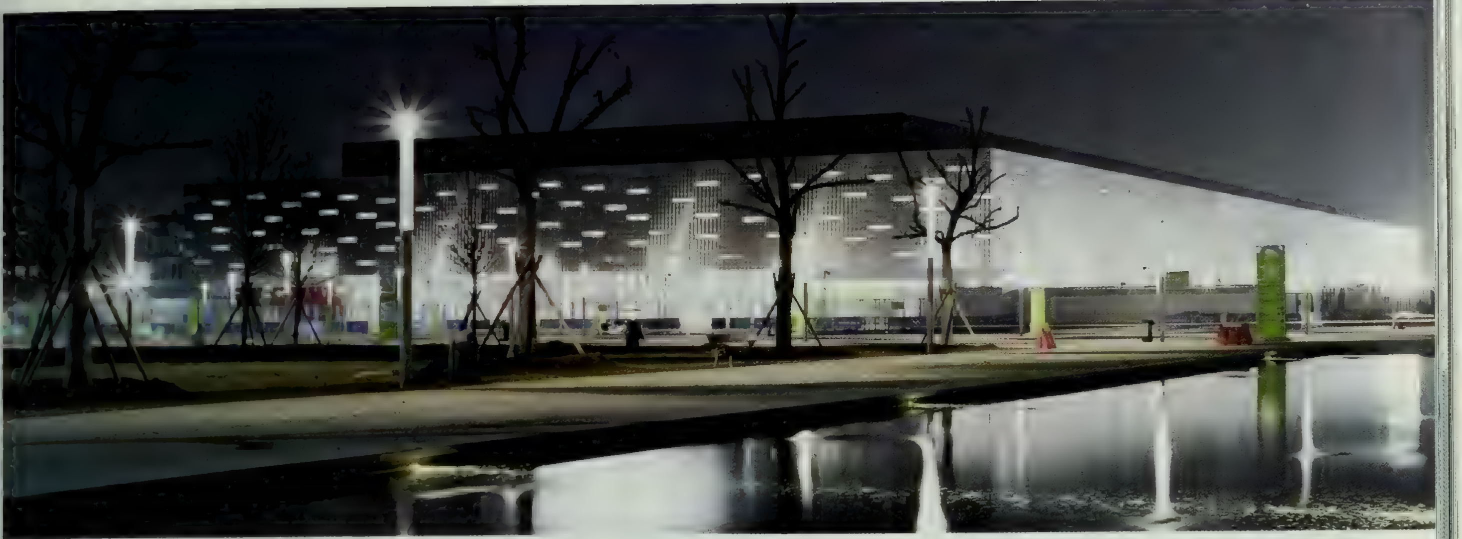
Solution

Isozaki looked to the past for inspiration: specifically, the Palau St. Jordi sports palace, which he designed for the 1992 Summer Olympics in Barcelona. Like that space, which is now used as a convention hall and concert venue, the ice hockey arena in Turin was designed to be completely transformable. On the ground floor, stands of seats along the building's two long sides are fixed. But the three sections of seats at each end—constructed as light, steel-framed apparatuses with plastic panels and polymer seats—roll out of the way to create a spacious empty hall, whose defining feature becomes an enormous fiberglass-and-sheet-metal roof. Some 450,000 square feet, it rests on a mere eight steel pylons pushed out to the edge. With steel trusses painted gray, and fitted with skylights and gymnasium lights, the warehouselike roof appears to float over the arena.

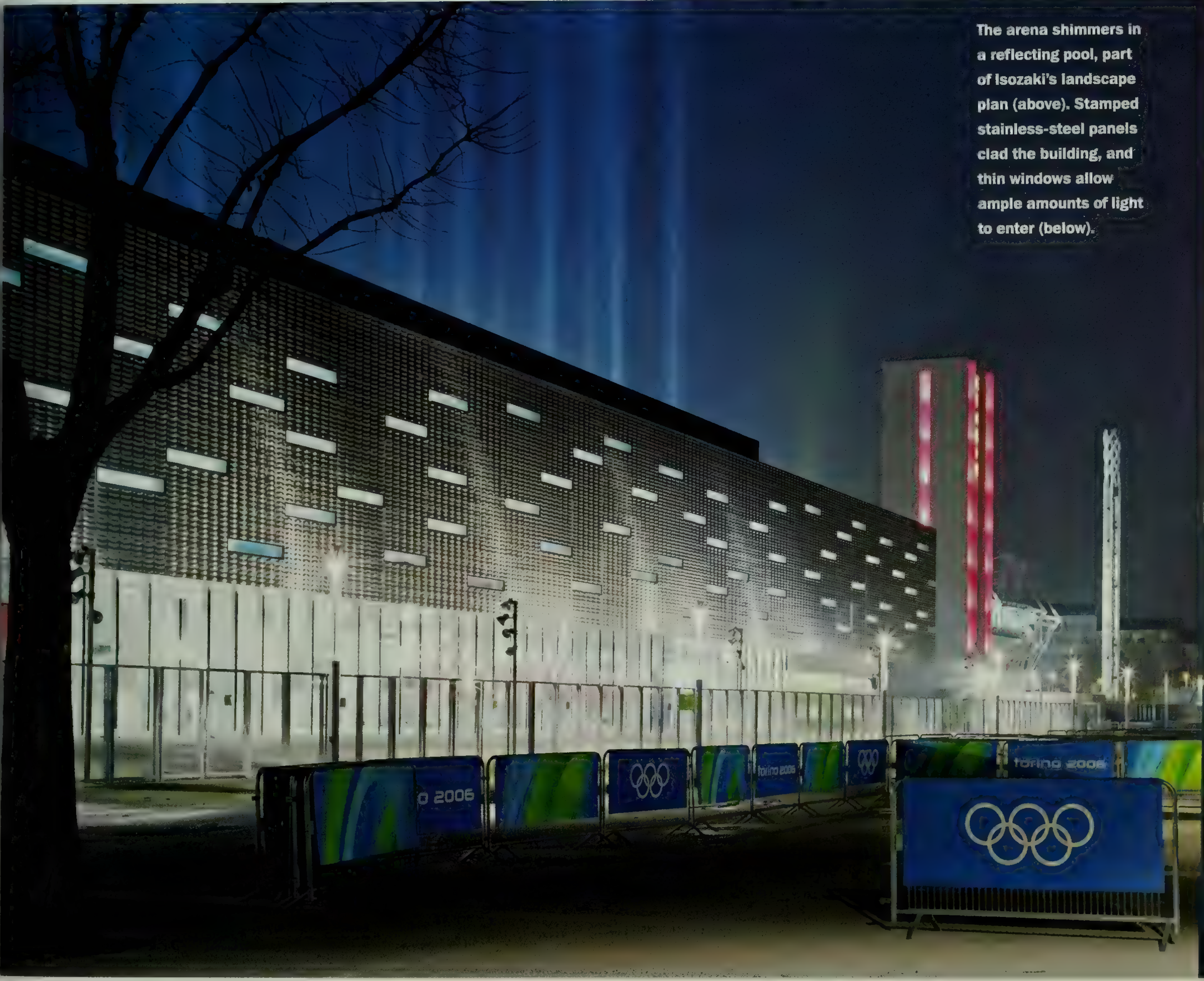
At the same time that Isozaki was thinking about future concerts and conventions taking place here, he needed to make sure that the space was unmistakably suited for Olympic ice hockey competitions. During the master planning and competition phase, he decided that his arena shouldn't be any higher than the existing stadium. To fit 15,000 people in the arena, he'd have to build down, not up: The entire footprint was excavated to a depth of 23 feet. Most of the subterranean space is staging area for storage, locker rooms, VIP lounges, and the like. But in the center, the

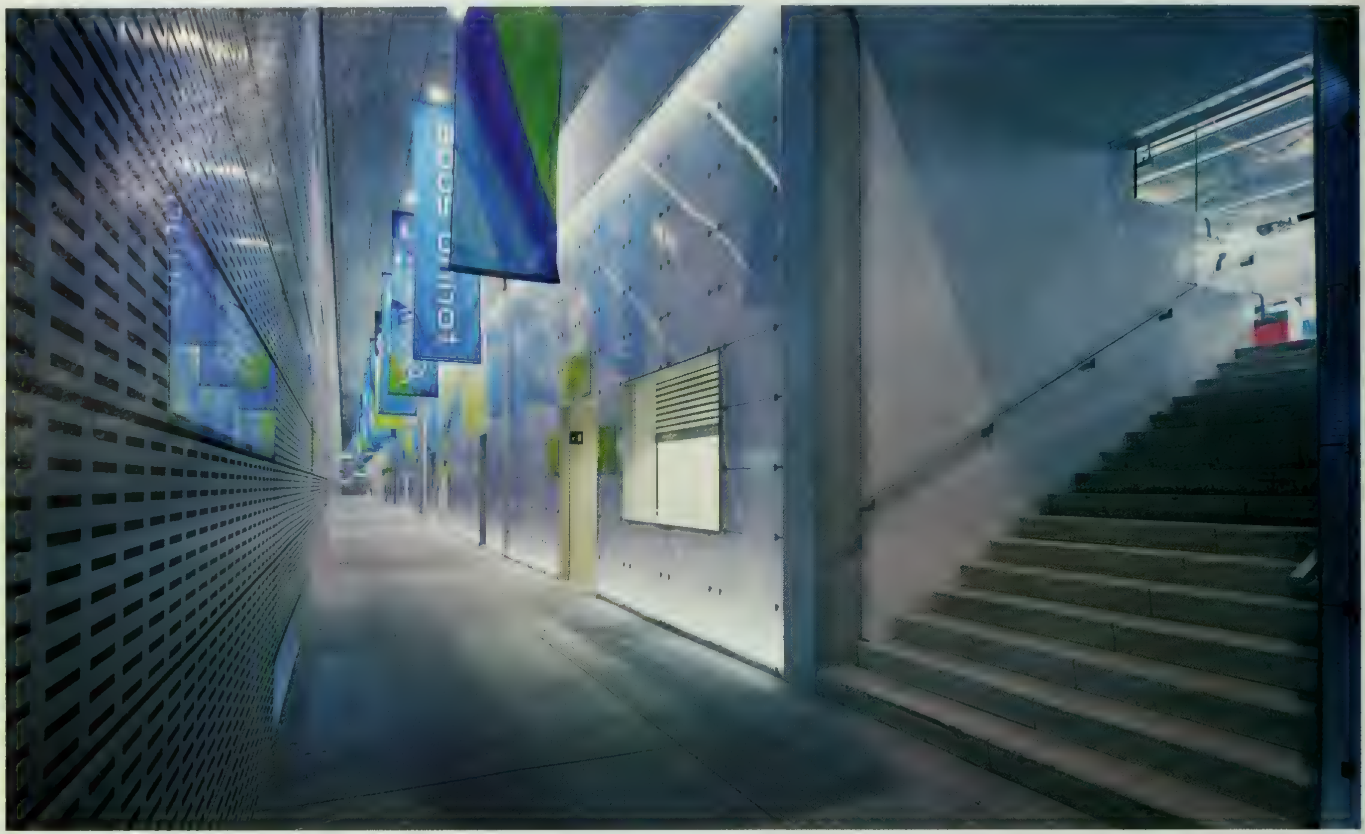
Paul Bennett is the Italian correspondent for RECORD. *He divides his time between Paris and Rome.*

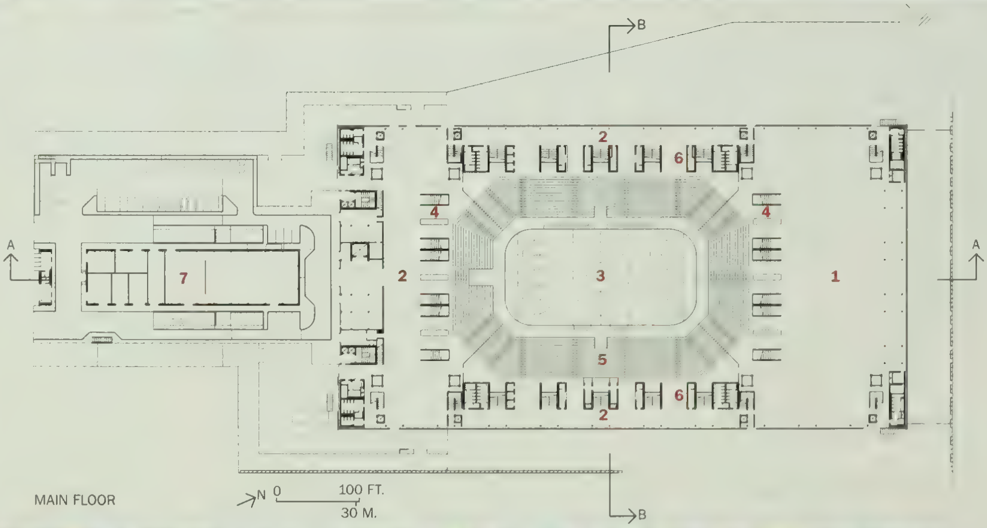
PHOTOGRAPHY: © ALESSANDRA CHEMOLLO



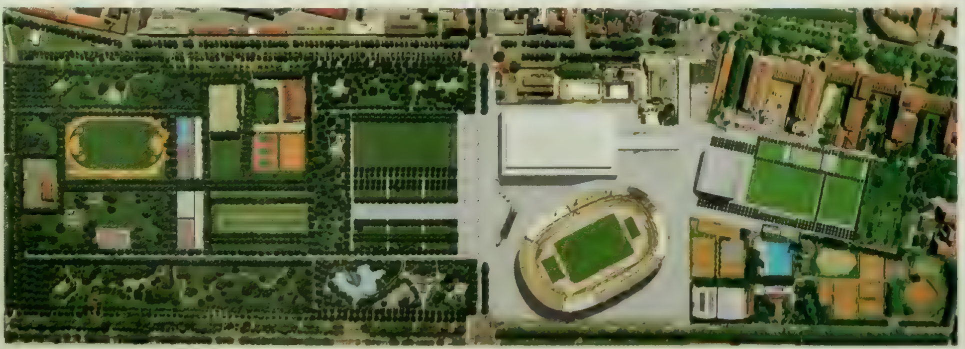
The arena shimmers in a reflecting pool, part of Isozaki's landscape plan (above). Stamped stainless-steel panels clad the building, and thin windows allow ample amounts of light to enter (below).



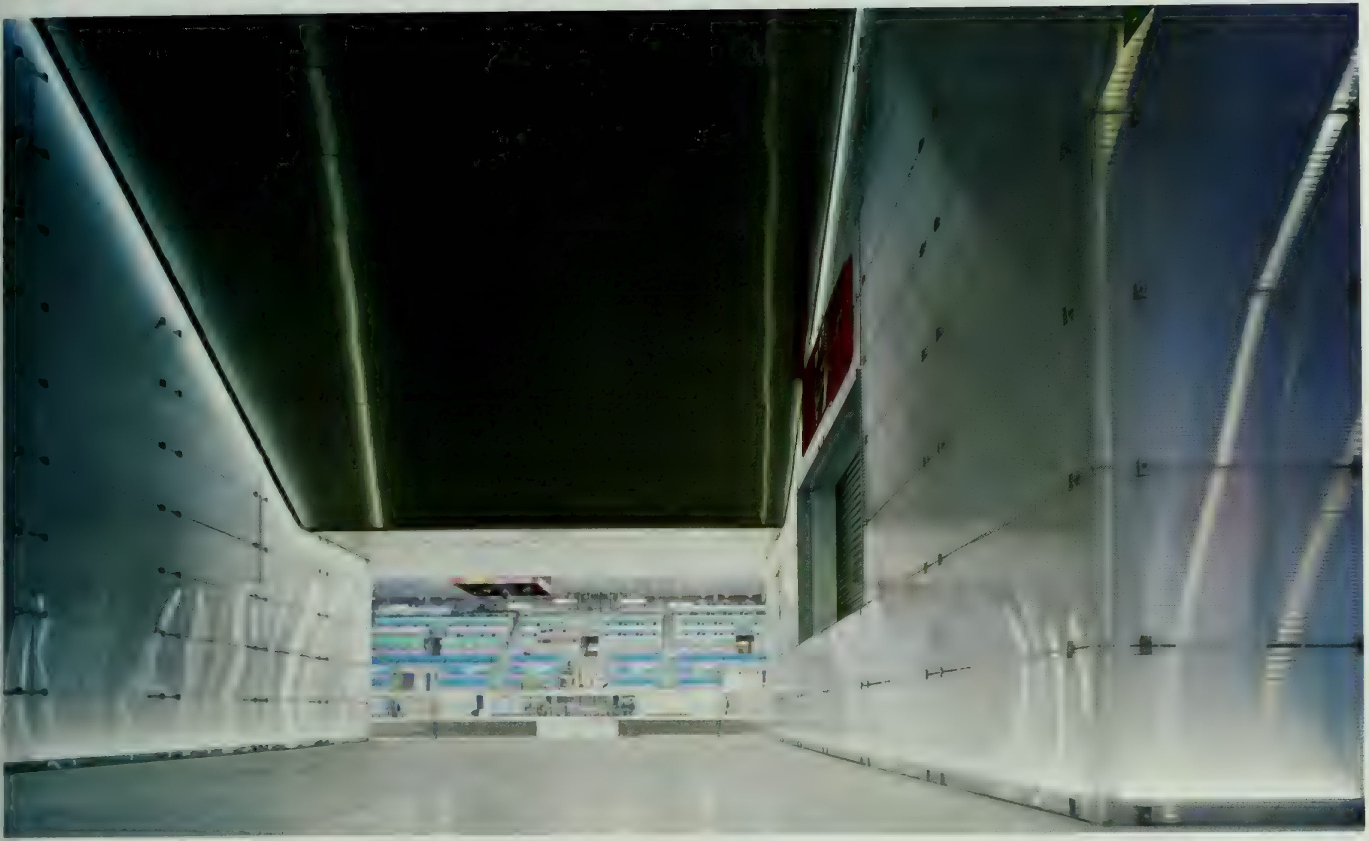


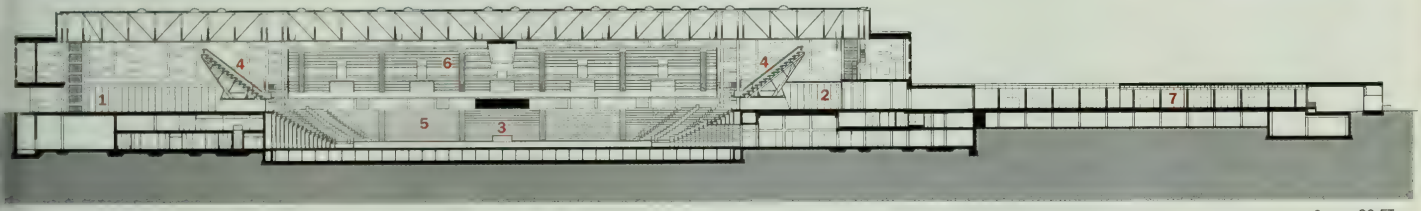


1. *Entrance hall*
2. *Foyer*
3. *Ice rink*
4. *Movable stands*
5. *Roll-back stands*
6. *Fixed seating*
7. *Power center*



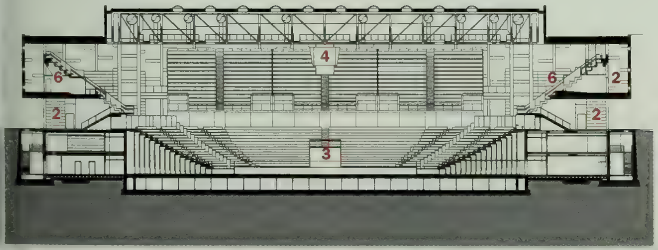
White plastic panels sheathe interior concrete walls (above and opposite), giving the corridor and entries leading to midlevel seating sections a luminous sheen. The arena abuts a 1930s-era stadium recycled for the Olympics (left).





SECTION A-A

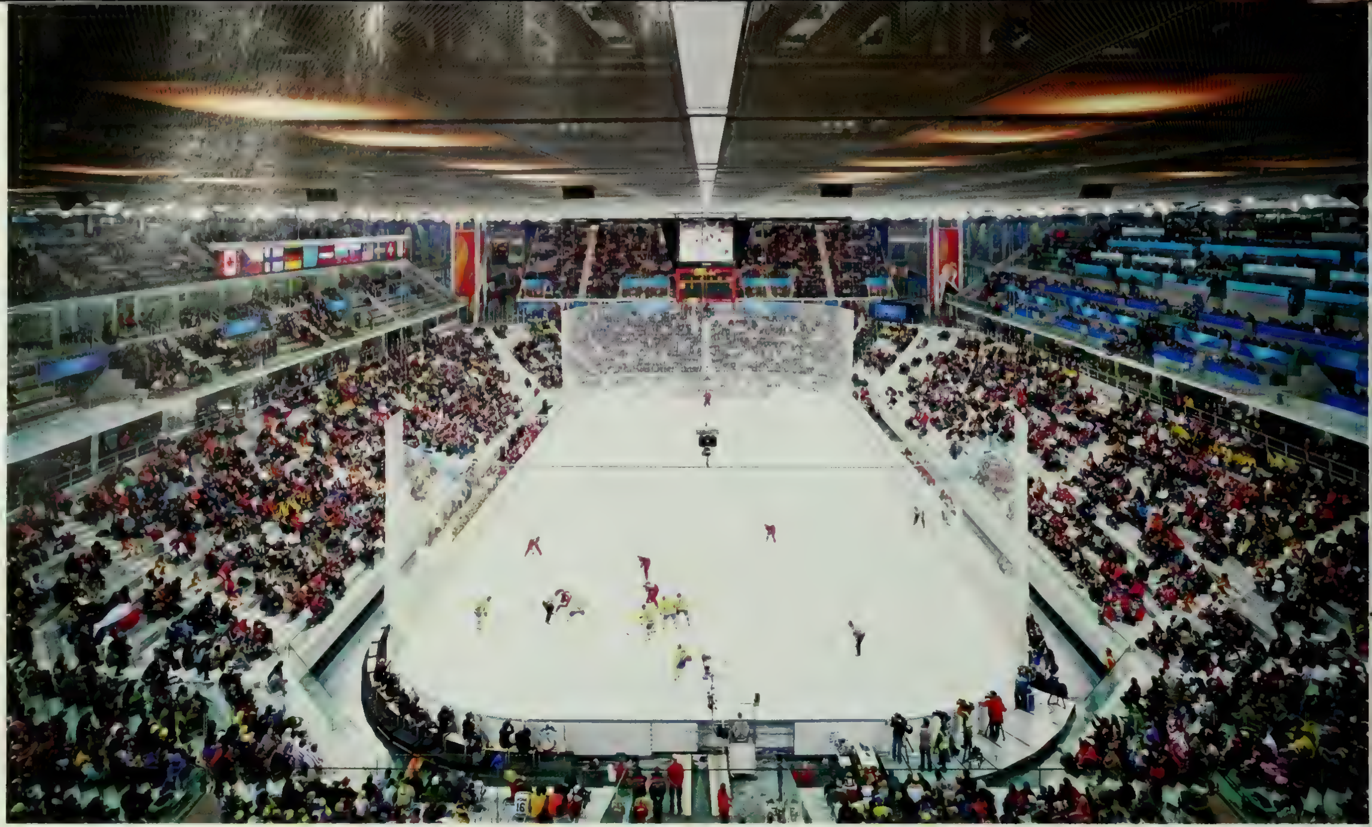
1. *Entrance hall*
2. *Foyer*
3. *Ice rink*
4. *Movable stands*
5. *Roll-back stands*
6. *Fixed seating*
7. *Power center*

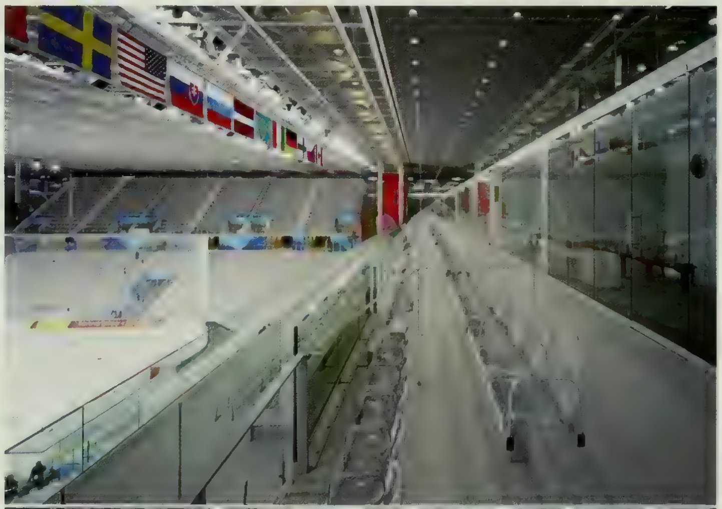


SECTION B-B

arena drops down with four stands of seats and a rink in the middle. The rink can be completely dismantled, and the stands can be pulled back into a 3-foot-deep cavity at the edge of the space—a nifty operation in which the polymer seats flip down, en masse, to create a huge, open space under the entire roof for large-scale conventions and industrial shows. Glass wraps the entire ground floor, while white plastic panels cover concrete interior walls. Along with the restrained gray-to-white color scheme and the 15,000 clear polymer seats, you almost think you are standing in a large igloo.

Outside, the project included a large landscaped component, giving Isozaki the opportunity to make a significant urban gesture. The rectangular site is bisected in the east–west direction by a wide promenade, paved in a pebbled concrete. To the east sit a large square and a landscaped park, halved by a reflecting pool on axis with the Torre Maratona, establishing a ceremonial approach to both stadiums. The flat topography of Turin sets up strong vistas of the buildings from a distance. In contrast to the graceful curve of the concrete Modernist municipal stadium, the ice hockey arena is a simple rectangular prism, sheathed in stainless steel brushed to a brilliant sheen. Each panel was pressed with ovoid patterns, giving the facade a scaly reptilian or robotic look. The arena might resemble an IKEA big box retail





Turin's ice hockey arena (above) can be turned into a venue for concerts and conventions. Stands of seats along the two long sides of the building are fixed (right), while seating at the hall's ends (below) swings out of the way, and lower rows of seats along the sides fold up, creating a large open hall. The floor can be raised.

store, if it weren't for the weightlessness of its shimmering stainless-steel against Turin's gray skies.

Commentary

Like other Olympic cities, Turin hoped that its two weeks on the world stage would be transformative. Beyond the influx of visitors and tourist dollars during the games, the city anticipated its large public works would give the city a new lease on life. This is always a big thing to ask of architecture, and—Barcelona and a few other examples notwithstanding—the Olympic Games often leave a mixed legacy of urban renewal. Not the case here. By reusing an old stadium for the opening and closing ceremonies, the city invested smartly in an eye-catching new ice hockey structure that should offer a source of constant income in the future. The inclusion of a large landscape component in the project helped avoid the common problem of having a great work of architecture sitting in a void. Isozaki developed a setting that makes his building better while also serving the surrounding community's needs. Bravo. ■

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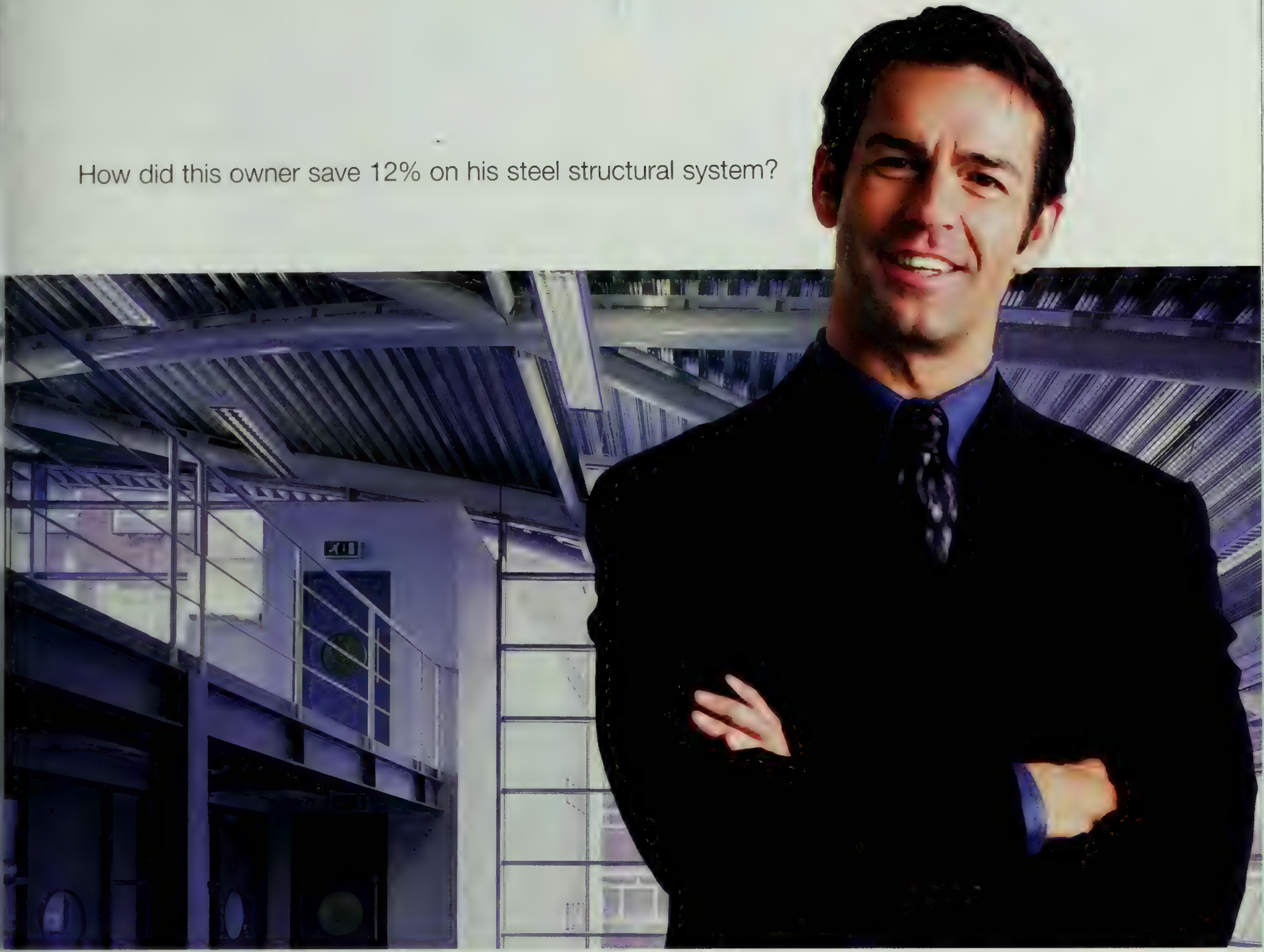

Interoperability – or what used to be called Electronic Data Interchange – enabled the entire building team to communicate seamlessly so the collaborating firms could identify, access and integrate electronic information across multiple systems. This interface created efficiencies that eliminated manual re-entry of data, duplication of business functions and the reliance on paper-based information management systems. The biggest advantage of **interoperability** is that it enabled real-time discussions on detail development and problem resolution to take place.

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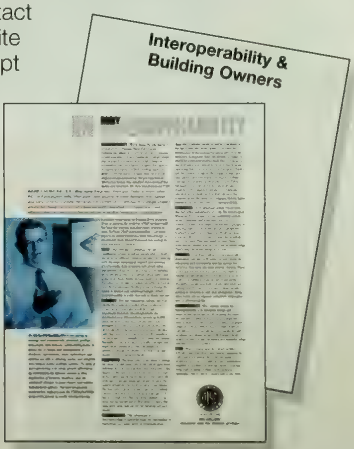

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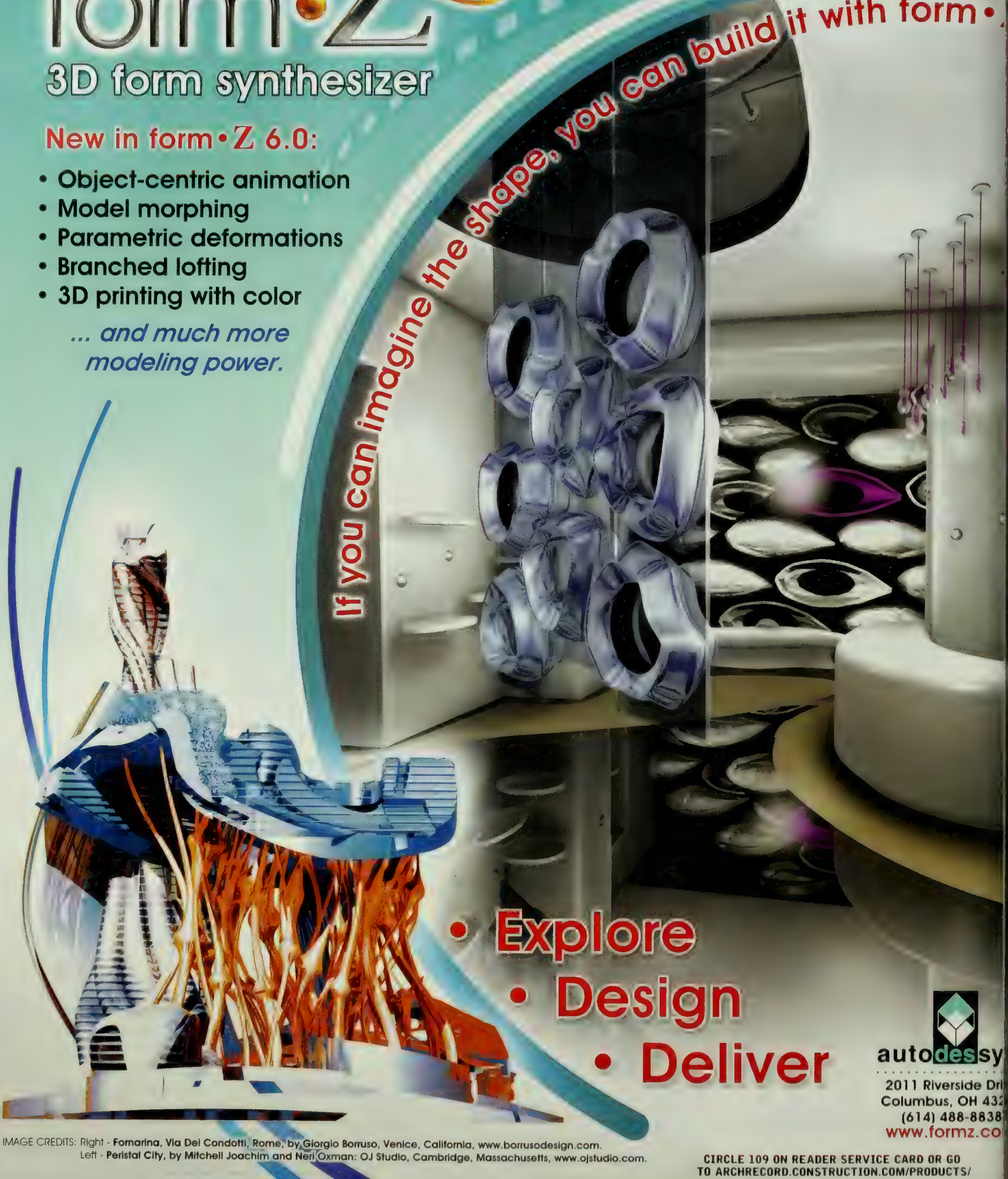

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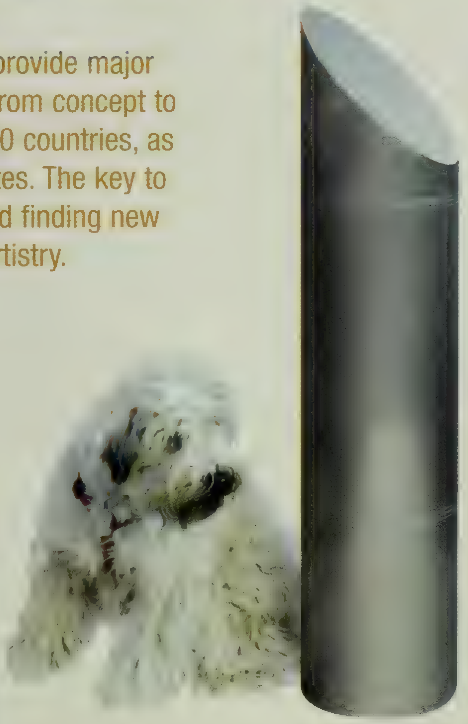

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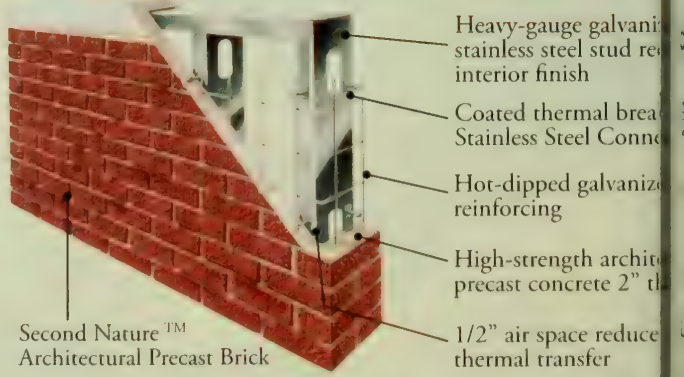

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Stadium Roofs Offer Much More Than Shelter

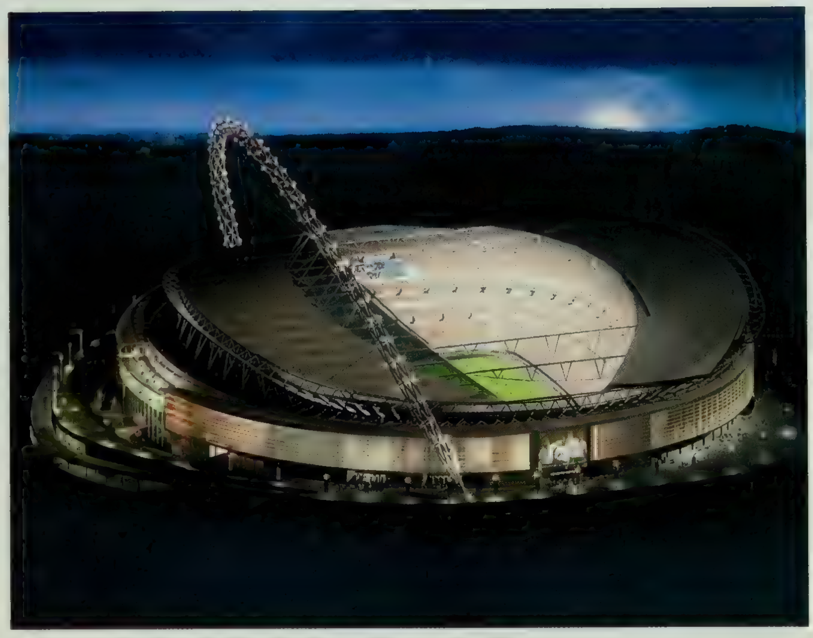
A GROUP OF RECENT INNOVATIVE PROJECTS DEMONSTRATES THAT A LONG-SPAN ROOF CAN PROVIDE THE PRIMARY OPPORTUNITY FOR EXPRESSION AND A KEY DESIGN AND CONSTRUCTION CHALLENGE

By Joann Gonchar, AIA, and Peter Reina

Stadiums for professional sports and world-class competition are increasingly technically complex and high profile. Project teams design and build these facilities under the glare of the media, on ight schedules, and with financing often dependent on the argess of voters. "These projects are built in a fishbowl, especially if they are publicly run," says Dennis Wellner, AIA, a senior principle at HOK Sport, one of a handful of firms specializing in stadiums and arenas.

The addition of a roof to a stadium, along with the long-span structure required to support it and maintain clear sight lines from the stands to the playing field, compounds the pressures on the design and construction team responsible for an already challenging project. And an operable roof, which necessitates an enormous mechanical device at the top of the building, adds yet another layer of complexity. "Hire a good structural and mechanization consultant," advises one architect.

A roof, of course, can keep sports fans comfortable by keeping the elements out and conditioned air in. It provides a more flexible facility and allows owners to generate additional revenue by hosting a variety of events year-round. But it is much more than a means of satisfying these practical requirements. It also serves, in many cases, as the building's signature element.



Wembley Stadium has a roof supported by a 400-foot-tall lattice arch visible from distant parts of London. It is the longest single-span roof structure in the world.

A stadium with such a roof structure is under construction in London. There, architects Foster and Partners, along with HOK Sport, are replacing the 1920s era Wembley Stadium with a 90,000-seat facility with an iconic steel arch 400 feet tall and spanning 824 feet. Although the opening of the almost $1 billion soccer facility is still several months away, the arch is already serving as a landmark, and has been visible from distant parts of the city since its erection two years ago.

The lattice arch, which Wembley officials say is the longest single-span roof structure in the world, is made of 41 circular stiffening diaphragms linked by more than 500, 1-foot-6-inch-diameter spiraling steel tubes. The assembly, generally 24 feet in diameter, tapers to its supports on either side of the stadium. Cables anchored to the stadium's perimeter steelwork hold the arch with a slight northward lean.

Two roughly quarter-moon-shaped fixed-roof sections shelter the stadium interior. The arch supports the leading edge of the northern-roof section. From there, steel trusses span across the stadium, helping to support the southern roof. The roof over the field is open to the sky, permitting natural ventilation and sufficient sunlight for the natural grass turf to grow. However, the stadium can be completely enclosed in about 15 minutes with operable panels that extend from the southern fixed roof.

The contractor, Multiplex Construction U.K., is now due to hand over the stadium to the owner, Wembley National Stadium Ltd., this September, many months late. The construction process has suffered a litany of setbacks since the arch was assembled on the field and jacked

Peter Reina is London-based correspondent for Engineering News-Record, *the McGraw-Hill Companies' weekly construction magazine.*

CONTINUING EDUCATION

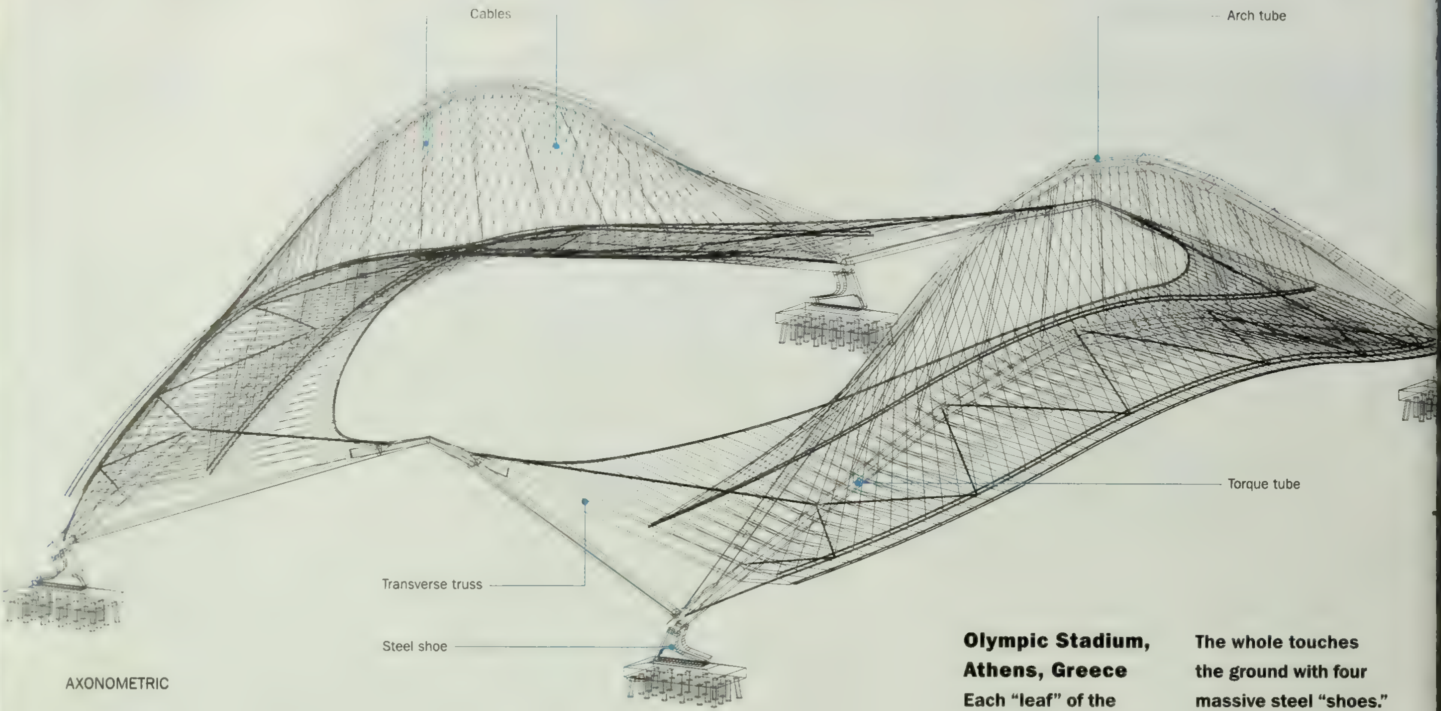
Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 264 and follow the instructions. Other opportunities to receive Continuing Education credits in this issue can be found in the sponsored section beginning on page 275.*

LEARNING OBJECTIVES

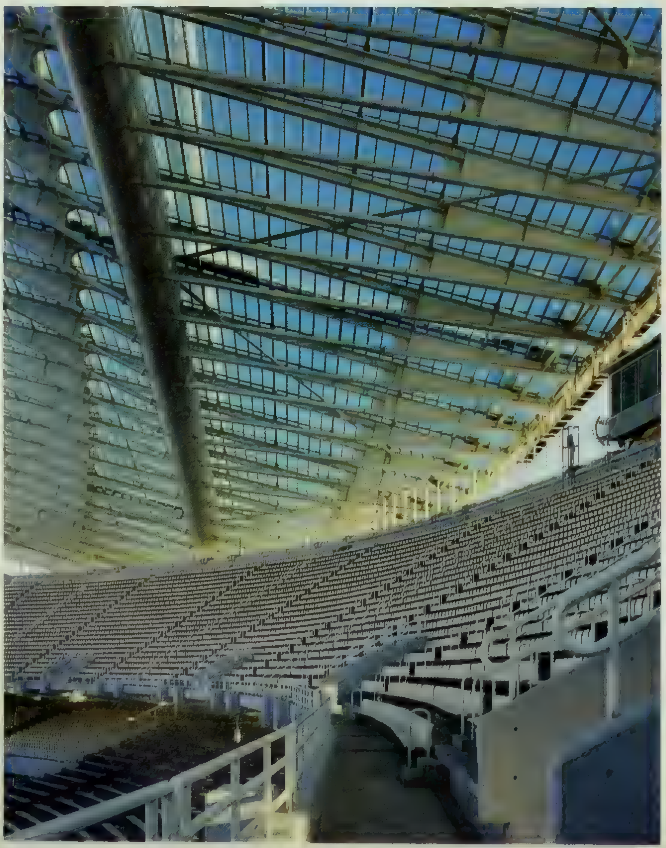
After reading this article, you should be able to:

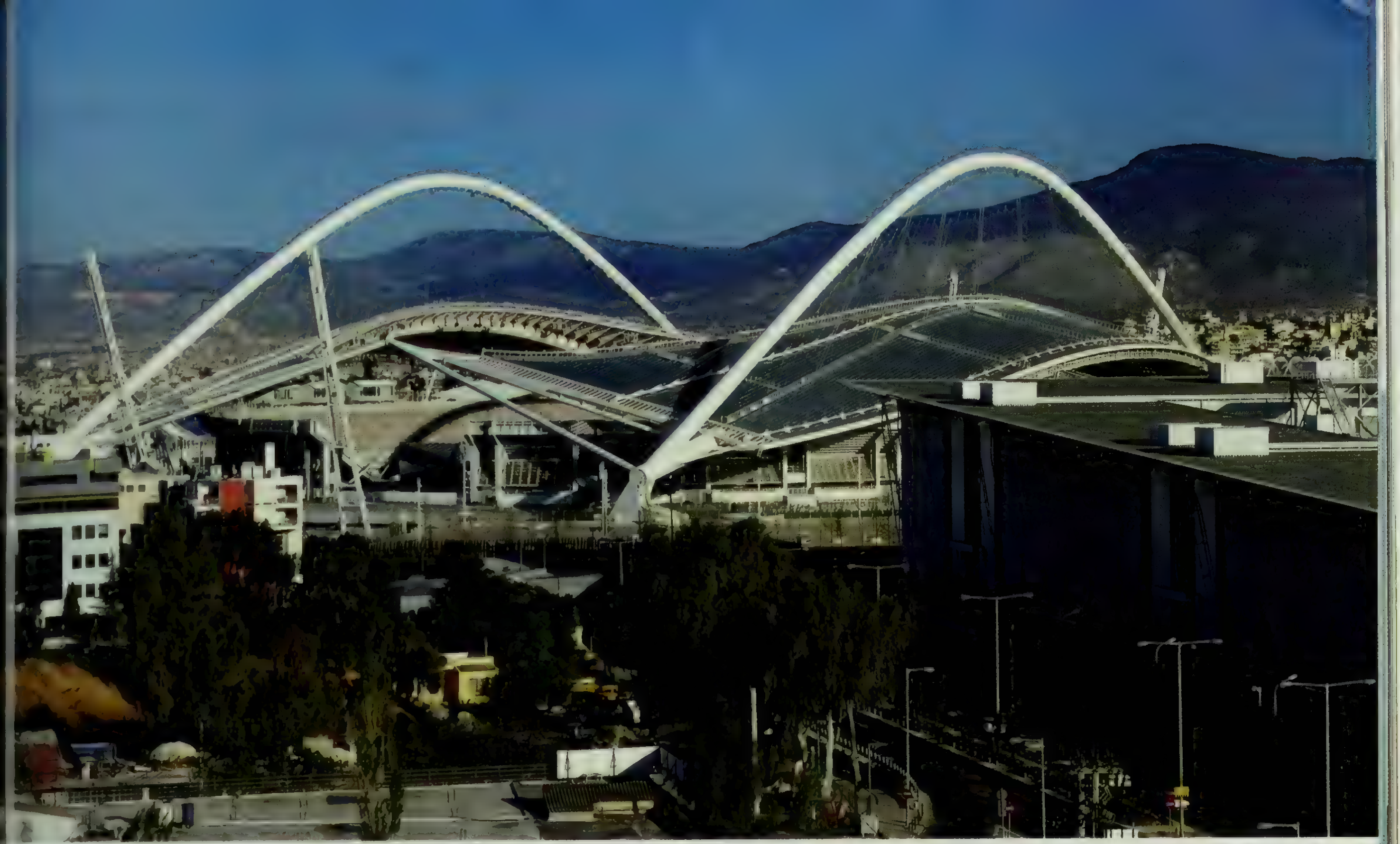
1. *Discuss the configuration of several stadium roofs.*
2. *Explain the structural components for various stadium roofs.*
3. *Describe the design and construction challenges of an operable roof.*

For this story and more continuing education, as well as links to sources, white papers, and products, go to **www.archrecord.com**.



Olympic Stadium, Athens, Greece
Each "leaf" of the winglike structure (above and opposite) spans 997 feet and consists of a 236-foot-tall upper arch connected to a lower torque tube by cables. Bolted to this lower tube are a series of transverse truss ribs. The whole touches the ground with four massive steel "shoes." Erectors assembled the roof in halves directly to the side of the stadium site (below). Crews then used jacks to move the leaves to their final positions sheltering the existing stadium bowl (left).





into place two years ago, including a legal battle between Multiplex and a subcontractor, and skyrocketing steel prices. Earlier this year, Wembley officials decided to transfer last month's Soccer English Cup Final to another venue, since the stadium's completion looked uncertain.

Olympic feat

To anyone who followed press coverage of the preparations for the 2004 Olympics held in Athens, the facilities and infrastructure required for those games also seemed destined for late delivery. Although Athens won the Olympic bid in 1997, legal and bureaucratic obstacles delayed the start of construction on many projects until 2002. But in spite of the slow start, builders and organizers did make it to the finish line in time, with the bridgelike roof of the main stadium providing the games' most recognizable feature (see Building Types Study, page 232).

To shelter the seating bowl of this 1979, 75,000-seat open-air stadium, Santiago Calatrava, FAIA, designed a roof composed of a pair of striking steel suspension structures, which Calatrava calls "leaves," spanning 997 feet. The polycarbonate-clad fixed covers join at a single point at each end of the field. Each leaf is composed of a 236-foot-tall and 10-foot-6-inch-diameter steel arch joined by cables to a lower arched tube almost 12 feet in diameter. This lower tube counters, through torsion, out-of-balance loads from the curving roof.

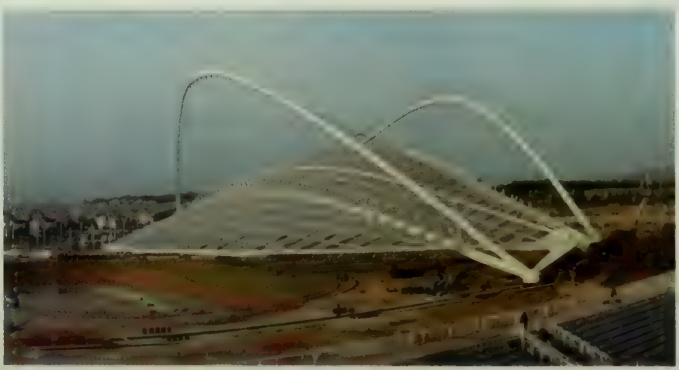
Bolted to the torque tube are a series of transverse truss ribs, 16 feet 6 inches on center. The length of the ribs increases from midspan outward, with an average length of 165 feet. The structure touches the ground at only four points—at massive steel "shoes," more than 21 feet tall and 36 feet long, where the upper arch and torque tube merge.

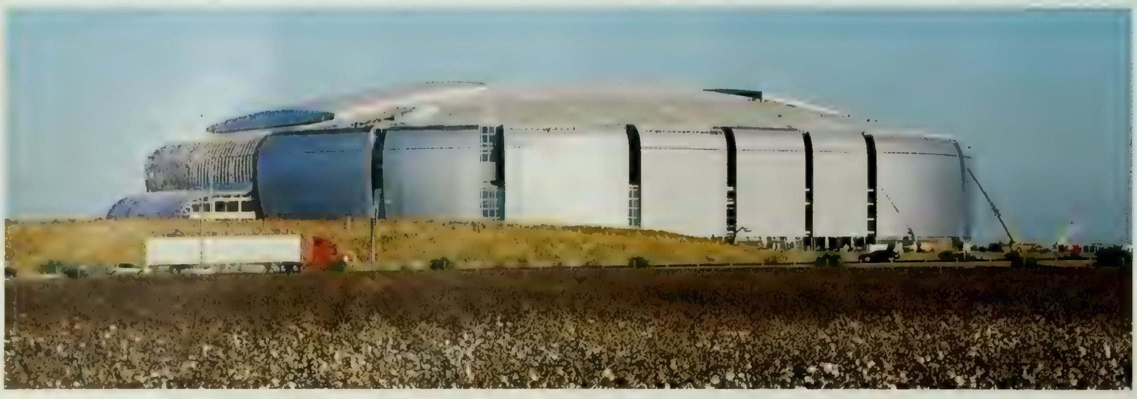
To finish the main stadium's complex structure on an ambitious timeline of about 18 months, Greek contractor Aktor built the roof in halves directly to the east and west of the stadium site, rather than assembling the roof in its final position over the seating bowl. The process allowed renovation of the existing stadium to move forward unimpeded by falsework and competing construction crews.

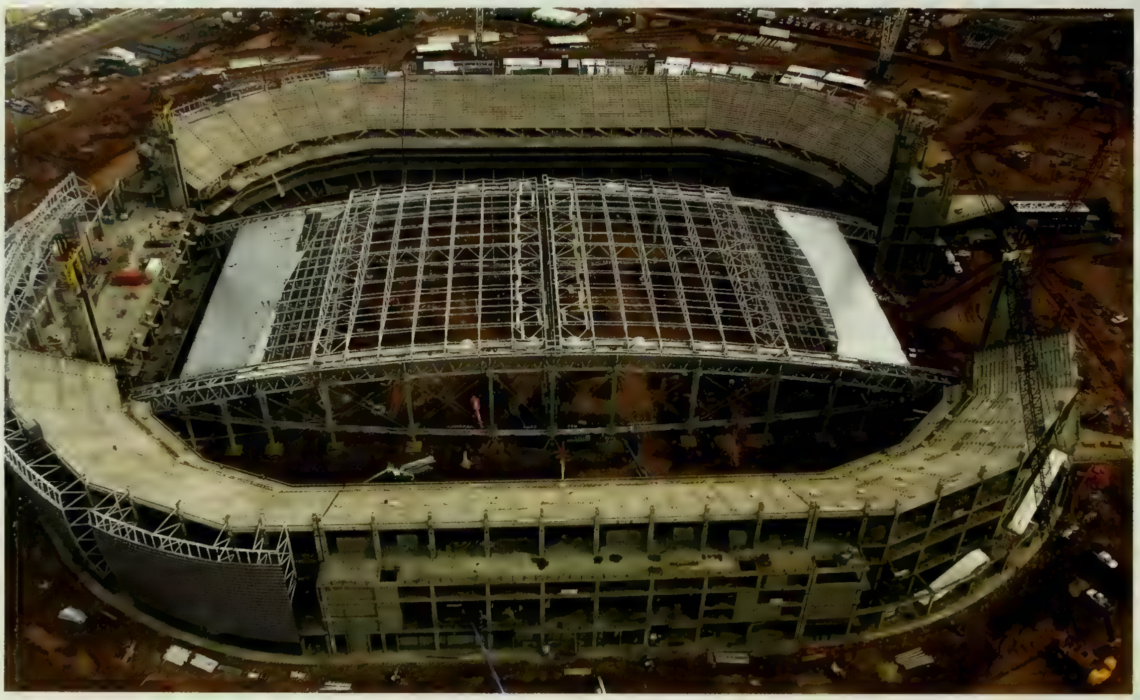
The steel erector assembled the top arch and torque tube sections, supporting them on temporary towers. After the upper and lower arched tubes were welded together at their ends, the ribs were bolted to the torque tube, and the cables partially stressed. Crews then used horizontal jacks to slide each assembly on stainless-steel tracks more than 200 feet over the stadium bowl. The last half was slid into place on June 4, 2004, leaving only several weeks for the roof's polycarbonate installation, final cable stressing, and other preparations before the August 13 opening ceremonies.

Olympic Velodrome, Athens, Greece

Contractors built the velodrome roof directly adjacent to the existing facility, and then used jacks to move it to its final position over the cycling track.







Cardinals Stadium, Glendale, Arizona
Inside the steel-panel-clad skin designed by Peter Eisenman to resemble a barrel cactus (above) is a reinforced-concrete stadium. Erectors built the 5,400-ton steel roof assembly (left) on the ground in seven months. Then, over the course of several days, they jacked the entire assembly 120-feet in the air through C-shaped slots in its four supporting corner supercolumns.

Construction crews followed a similar sequence for a Calatrava-designed covering for an existing velodrome that is part of the same sports complex. The 4,000-ton, metal-clad roof, consisting of a pair of double inclined arches joined by cables and supporting transverse ribs, was built in one piece on a site adjacent to the cycling track and then moved to its final position using jacks.

Raising the roof

Because Calatrava began with an existing facility, design and construction of the roof was the primary construction project at the Athens Olympics Stadium. But even with entirely new facilities, the complexity of the long-span structures that top them sometimes drives the whole construction sequence. At the $450 million stadium for the National Football League's Arizona Cardinals under construction in Glendale and on track for completion in time for a preseason game with the Pittsburgh Steelers on August 12, "the roof structure dictated the way things were to be built," says Robert Aylesworth, Jr., executive vice president for Hunt Construction Group, the project's design-build contractor.

The 63,000-seat stadium, designed by Eisenman Architects with HOK Sport, is clad in insulated steel panels to resemble a barrel cactus. It has an operable roof and the first field in North America to roll out of one end of the stadium on a 44-foot-long, 230-foot-wide, and 40-inch-deep "cake tray." This arrangement will ensure sufficient sunlight for the natural turf and also provides a floor surface suitable for events like conventions and concerts. According to the owner, the roll-out field was about $50 million less than a retractable roof with a large enough opening to allow necessary sunshine to reach the turf.

The 5,400-ton roof assembly was built on the ground and, over the course of several days, jacked 120 feet in the air to its final position on top of four corner-reinforced concrete supercolumns, each 20 feet by 17 feet in plan. The motivation for building the 5,400-ton roof assembly on the ground was primarily worker safety, says David Schuff, chairman of the project's steel fabricator and erector, Schuff International.

THE PRIMARY MOTIVATION FOR BUILDING THE 5,400-TON ROOF ASSEMBLY ON THE GROUND WAS WORKER SAFETY.

The process also saved time and money. Crews began building the roof in August 2004 and lifted it seven months later. The contractor

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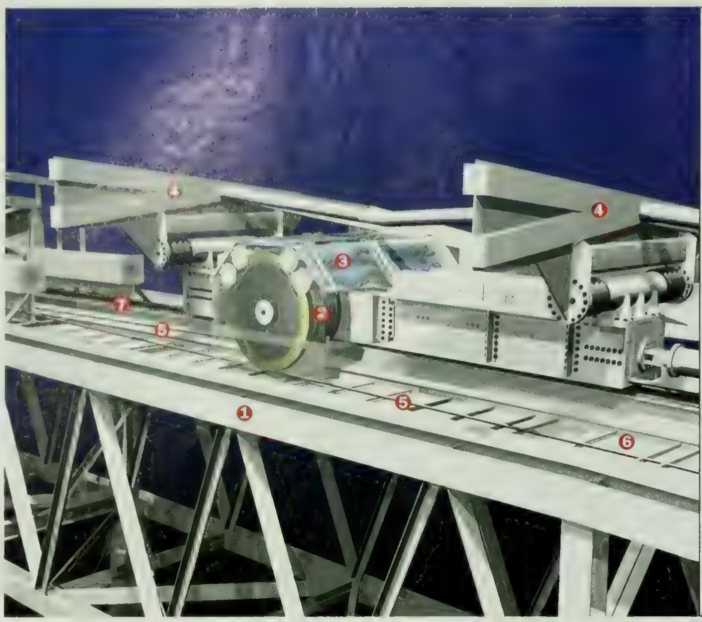

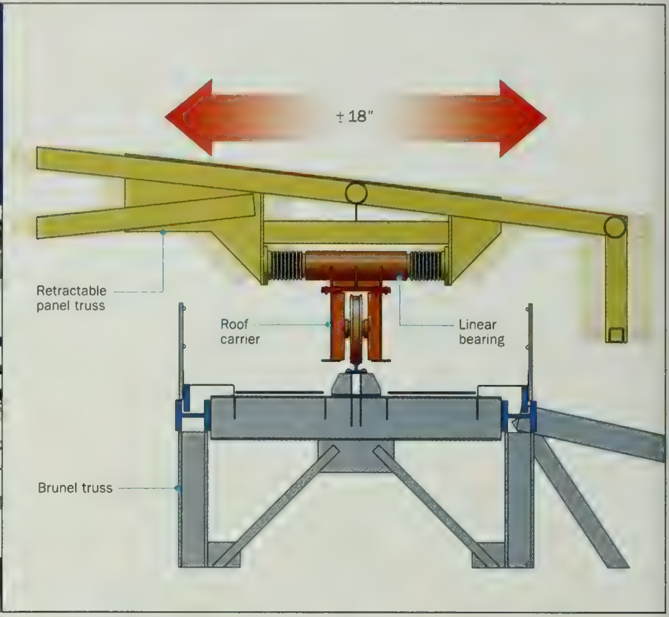

1. *Brunel top chord*
2. *Cable drum*
3. *Motors*
4. *Panel truss*
5. *Cables*
6. *Cable trough*
7. *Crain rail*

Cardinals Stadium, Glendale, Arizona

Two panels retract to create a 240-by-360-foot opening in the stadium roof (right). Each panel is supported by eight sets of "carriers," or wheeled transporter assemblies (above left). These ride on crane rails that sit on top of the Brunel trusses top chords. To allow for thermal expansion and prevent panel binding during operation, one end of each of the 16 panel trusses incorporates a linear bearing. The collarlike fitting allows movement of 18 inches in either direction.

estimates that avoiding the use of shoring and multiple lifts shaved 10 weeks off the construction schedule and saved about $2.5 million. "If we built it in the air, we would still be out there with shoring," says Schuff.

The construction and design team decided to build the roof assembly on the ground early in the design process, allowing incorporation of several features in the structure to facilitate the lift. For example, the supercolumns are C-shaped in plan and have 15-foot-wide slots through which the roof structure bearing was lifted.

In addition, because the 156-foot-tall supercolumns were required to perform the lift, they had to be built before much of the seating bowl, and to withstand the forces of the jacking process. "We needed to consider the supercolumns as freestanding elements and had to consider them at every stage [of construction] for stability," says Dean Purdy, president of TLCP Structural, engineer for the concrete stadium. "The critical design considerations were the forces and moments imposed at the top of the supercolumns due to jacking."

The 500,000-square-foot roof consists of two 87-foot-deep, lenticular-shaped Brunel trusses that span 700 feet. Spanning between these are eight Vierendeel trusses for each of two operable panels that bipart to create a 240-foot-wide-by-360-foot-long opening in the roof. The Brunels support three fixed trusses at each end of field. Five secondary trusses on each side of the field span from the Brunel to perimeter.

In spite of its name, the Brunel is not technically a truss, according to Mark Waggoner, an associate with Walter P Moore, the roof's structural engineer. Instead, the top chord works much like an arch, with constant compression along its length. The bottom chord works like a catenary cable to carry constant tension. "When combined, they create a system that works efficiently and requires only slender struts between them, versus the heavy diagonal elements of a traditional truss," he says.

THE BRUNEL IS TECHNICALLY NOT A TRUSS, BUT IS MORE LIKE AN ARCH COMBINED WITH A CATENARY CABLE.

The roof has two retractable panels, 185 feet long and 285 feet wide. Each panel is supported by eight sets of "carriers," or wheeled transporter assemblies, controlled by four, 7½-horsepower motors. These ride on crane rails that sit on top of the Brunel top chords.

The Cardinals Stadium roof will be the first roof in the U.S. to

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Lucas Oil Stadium, Indianapolis
The roof's two operable panels are supported by five peaked box trusses spanning 300 feet between two 752-foot-long superframes.

operate on an incline. Each panel must traverse an incline varying from zero to 14 degrees as it moves from the closed to open position along the curved top chords of the Brunel trusses. Because the impact of gravity becomes greater on the system's cables as the roof nears the completely open position, the speed of the roof slows from a rate of 6 inches per second to a rate of 3 inches per second. "This is so we will never have inertial problems and trouble stopping [the roof in case of emergency]," explains Cyril Silberman, C.E.O. of Uni-Systems, the project's mechanization consultant.

Thermal movement is also a source of concern for roof operation. To avoid binding or locking of the system as the 16 trusses supporting each panel expand in the Arizona sun, the system has a linear bearing integrated into its western end. The bearing works much like a sliding collar, allowing movement of 18 inches in either direction when trusses lengthen or contract.

The Cardinals Stadium is only the second NFL facility topped with an operable roof. The first was Reliant Stadium, home to the Houston Texans, designed by HOK Sport and completed in 2002. Two more NFL operable roof facilities are under way—one for the Indianapolis Colts, to open in 2008, and another for the Dallas Cowboys, to open in 2009. HKS is designing both facilities.

The Colts' facility, known as Lucas Oil Stadium, will have the first operable roof supported on more than two parallel rails, according to Tarek Ayoubi, project manger for Walter P Moore. Rails for each of the two 596-foot-by-163-foot panels will run atop five peaked box trusses that span between two 752-foot-long superframes running along the field sidelines, 300 feet apart. The multiple supports "allow a larger opening at lower cost," says Brian Trubey, AIA, HKS design principal.

The challenge is to keep each panel's five sets of motors working in unison to avoid racking and overstressing. A computerized control system, devised by Uni-Systems, will keep the wheels in sync. The roof will also have a linear bearing much like that installed at the Cardinals Stadium. "Thermal expansion issues become a little more important with multiple rails," says Silberman. ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- Read the article "Stadium Roofs Offer More Than Shelter" using the learning objectives provided.
- Complete the questions below, then fill in your answers (page 361).
- Fill out and submit the AIA/CES education reporting form (page 361) or download the form at www.archrecord.com to receive one AIA learning unit.

QUESTIONS

1. A roof on a stadium provides for which of the following?
  a. keeps rain out
  b. keeps conditioned air in
  c. provides the building's signature element
  d. all of the above

2. Why did contractors choose not to build the roof of the Athens Olympic Stadium in its final position over the seating bowl?
  a. to shorten the time required to install polycarbonate cladding
  b. to allow renovation of the seating bowl to move forward simultaneously
  c. to reduce insurance risk
  d. to allow testing of roof operation

3. Which facility has a retractable roof that operates on an incline?
  a. Athens Olympic
  b. Wembley
  c. Arizona Cardinals
  d. Reliant

4. Why is each roof panel at the Lucas Oil Stadium supported by five rails instead of the more typical two?
  a. to allow for clear sight lines
  b. to allow for quicker construction
  c. to allow a thinner frame
  d. to allow a larger opening at lower cost

5. Which is not true for the Wembley Stadium arch?
  a. it has a southward lean
  b. it supports a part of the roof
  c. it was assembled on the field
  d. it serves as a landmark

6. The speed that the roof of the Cardinals Stadium opens and closes varies to counteract what force?
  a. time
  b. gravity
  c. velocity
  d. relativity

7. What was the critical design consideration for the Cardinals Stadium 156-foot-tall supercolumns?
  a. compression in the Brunel truss top chord
  b. tension in the Brunel truss bottom chord
  c. the forces and moments imposed due to jacking
  d. lateral forces

8. How did designers of the Cardinals Stadium prevent thermal expansion from interfering with roof operation?
  a. by reducing the number of trusses
  b. by reducing the number of movable parts
  c. by allowing movement through a linear bearing
  d. by designing a roof that reflects the sun's heat

9. The roof structure of the Cardinals Stadium was built on the ground to achieve all of the following except which?
  a. to improve worker safety
  b. to speed construction
  c. to improve roof operation
  d. to save money

10. Which is not true for the Cardinals Stadium?
  a. an artificial turf field will roll out of the stadium
  b. it is clad in insulated steel panels
  c. it is designed to resemble a barrel cactus
  d. it has an operable roof

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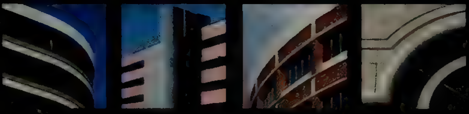

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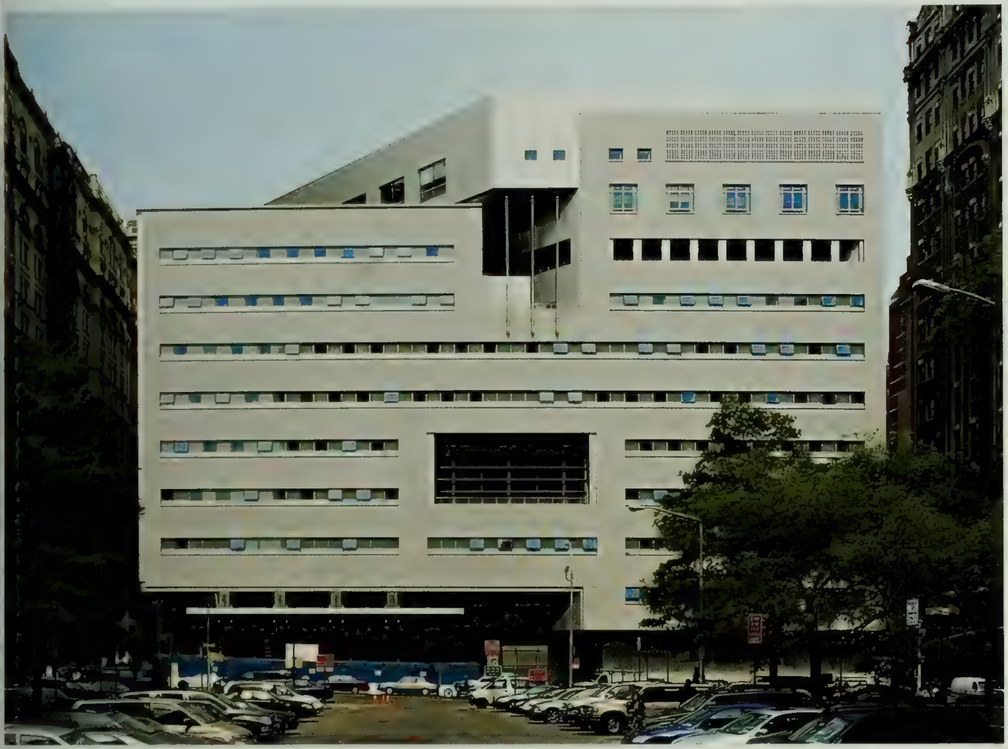
Lightening up the court system

MITCHELL/GIURGOLA ARCHITECTS TRANSFORMS AN INHOSPITABLE BRUTALIST COURTHOUSE IN LOWER MANHATTAN INTO A LIGHT AND AIRY STRUCTURE MORE IN TUNE WITH ITS NEIGHBORS



The Manhattan Family Courts building's original black granite panels (below), which were already falling off when the building opened, were replaced with a light granite unitized-curtain-wall system (left).

By Russell Fortmeyer

The Manhattan Family Courts building, designed by Haines, Lundberg and Waehler, was built in 1975 as a Brutalist concrete structure. Clad in forbidding black granite, it had few windows, an almost total lack of street-level transparency, and was an intimidating presence for families undergoing emotional court proceedings. The building had even been dubbed "Darth Vader."

Black granite was famously used in Manhattan on Eero Saarinen's building for CBS, an early 1960s example of a concrete skyscraper where the structure defined the limitations of the exterior perimeter cladding system. While Saarinen's building relied on wedged columns to expand the amount of sunlight on each floor, the Family Courts building's structural system was angled at 45 degrees as a way to visually connect the interior to Foley Square to the south. Both projects' angular plans succeeded in making the windows virtually disappear when viewed at certain approaches, further accentuating the buildings' fortresslike appearance.

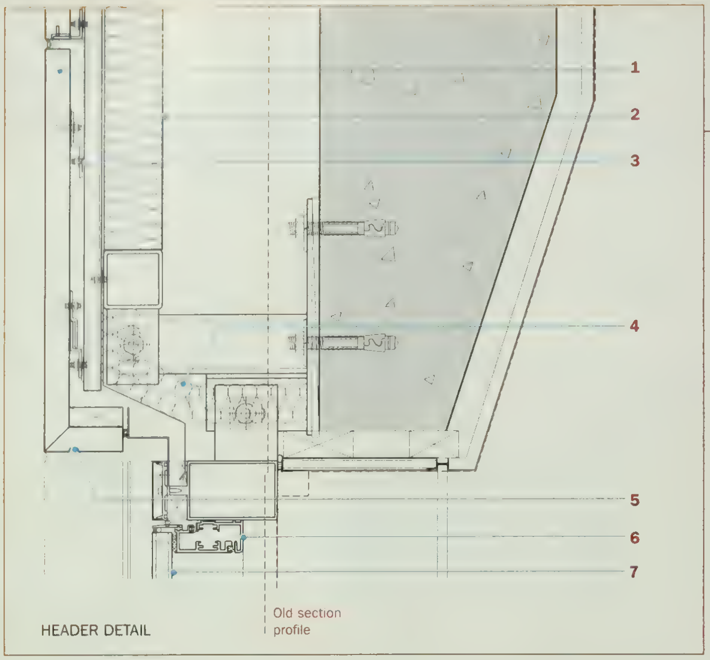
Compounding the 460,000-square-foot Family Courts building's ghoulish presence in Lower Manhattan, on the day it opened its granite cladding system was already in the process of falling off the concrete structure. The city responded by constructing a covered walkway around it—intended to be temporary, but ultimately permanent—which added to its unwelcoming presence. The ground-floor lobby posed a number of problems, including poor mechanical systems, harsh lighting, a proliferation of confusing signage, and deficient space for security equipment.

In 1999, the city and state agencies responsible for the building asked Mitchell/Giurgola Architects to undertake an assessment of the its structural, systems, and programming deficiencies in an effort to begin rectifying its sad legacies. What began as a study eventually evolved into a complete reclad project that allowed the architects to reconsider the building's appearance with a more contemporary understanding of justice in mind.

Steve Dietz, AIA, of Mitchell/Giurgola, considers the original design a product of an aesthetic moment that gave little consideration to the site or the context of the client's business. "The judges [felt] the building was not what people expected," Dietz says. "We wanted to upgrade its sense of authority."

Mitchell/Giurgola has undertaken a number of similar projects, most of which were built in the post–World War II era with new products and techniques that have wilted after years of use. These projects, which they refer to collectively as "Boomer Buildings" (referring to the years in which the population boomed after the war), have a number of problems in common: poor curtain-wall systems, deficient m/e/p systems, lack of neighborhood context, and obsolete program configurations.

Since many of the other court buildings in the area are



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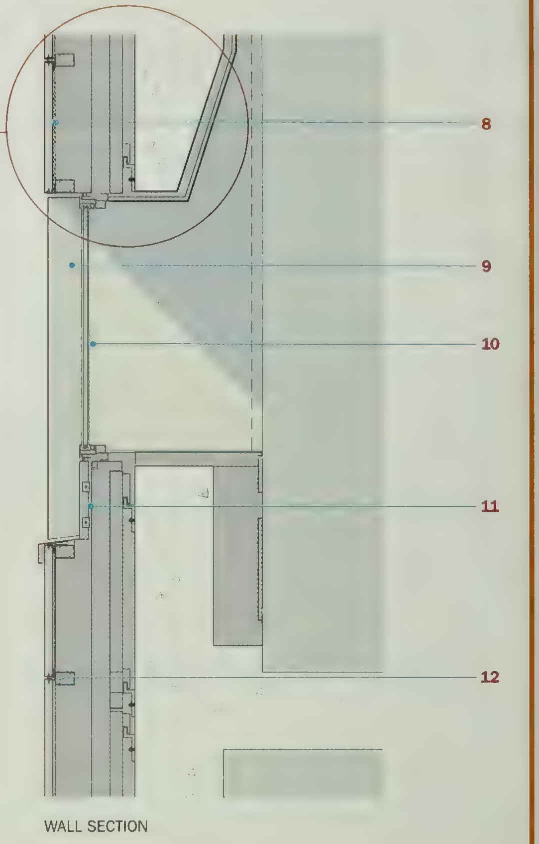

WALL SECTION

1. *Granite panel*
2. *Galvanized steel back pan*
3. *Unistrut mounting device*
4. *Mineral wool fireproofing*
5. *Painted aluminum operable window frame*
6. *Continuous drip edge*
7. *Structurally glazed insulated glass unit*
8. *Granite panel on an aluminum frame*
9. *Vertical glass fin*
10. *Operable aluminum window*
11. *Aluminum panel*
12. *½-inch caulk joint at granite panels*

Neoclassical-style stone temples, the Family Courts's glaring Late Modernist facade, with a random pattern of punch-card windows, stood apart. It differs starkly from recent courthouse design that depends on sweeping expanses of glass to bring a perceived transparency to the justice process. Mitchell/Giurgola's Carol Loewenson, AIA, sees the shift to glass as a product of society moving away from an unquestioning faith in the courts. "Now they want to know more," Loewenson says. "The building makes a difference to their perception of that."

Lightening the facade

The building's original construction, as well as better-than-expected as-built documents, gave Mitchell/Giurgola some advantages despite the need to replace the exterior while the courts were still in daily use. The 14-inch-thick concrete shear-wall shell was entirely waterproof, so the removal of the black granite could occur without the need for time-consuming and expensive temporary interior walls. The robustness of the structure also allowed the architects to consider multiple envelope concepts, including an all-glass curtain-wall system, before settling on a larger-veined, gray-white granite, which Dietz says minimized the possibility that the building would still have the single-volume appearance that the original glossy black granite had created.

The project's structural engineer, Ysrael A. Seinuk, concluded that the existing configuration of windows had to remain, and new windows could not be added. The original openings conform to a 3¾-foot-9-inch grid that, also for structural reasons, the architects had to continue using for the new curtain-wall system. Dietz says a unitized-curtain-wall system was preferred because it could be applied easily and quickly, causing minimal disturbance to the client. Removing the existing black granite was no problem, Dietz says, as each panel shattered like tempered glass, sparing the client a potentially noisy removal process.

The windows, which are operable, were reconfigured as strips across the facade. Metal sills step the glass back from the surface of the facade and accommodate decorative glass fins that arrange the existing openings and infill metal panels into even divisions. "We wanted to bring back the level of detail you see in the neighboring buildings," Dietz says. The removal of a series of concrete fins that enclosed an upper-floor waiting room allowed the installation of a glass curtain wall, bringing more natural light into the building and helping to reduce the prisonlike aspects of the original design.

The construction of the curtain-wall system occurred off-site. The stone was shipped from a Georgia quarry to Canada to be cut and assembled with the glass on an aluminum framing system of 3¾-by-9-foot panels. From there it was shipped to Pennsylvania to be tested prior to arriving on-site to be hung on the building. Proceeding from top to bottom and left to right on each face of the building, the installation of the panels was easily achieved by connecting three steel tabs to clip angles mounted to the concrete shell.

A new angle for the lobby

Significant structural changes needed to be implemented before Mitchell/Giurgola could begin to plan a new distribution of program spaces and an entirely new entry procession for the lobby. A city agency was relocated to another building in order to provide the architects flexibility in accommodating the additional space requirements for a security equipment and queuing area not originally necessary in the 1975 plan.

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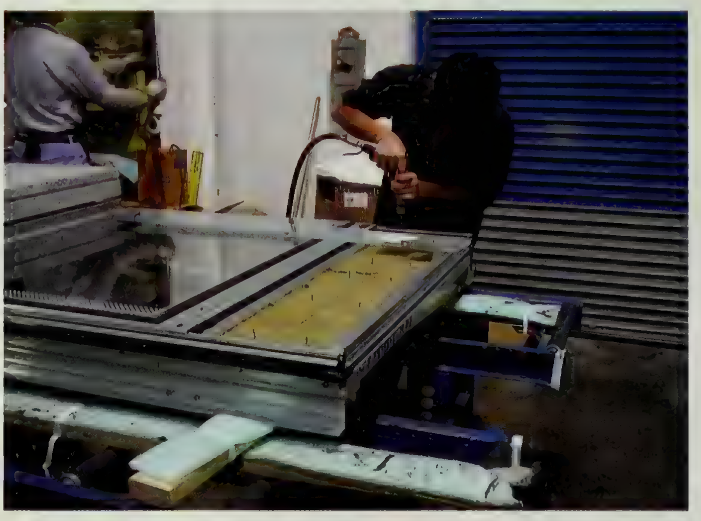
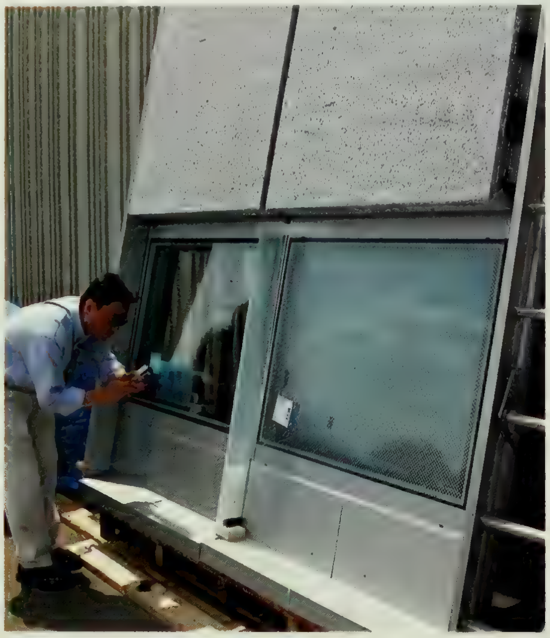
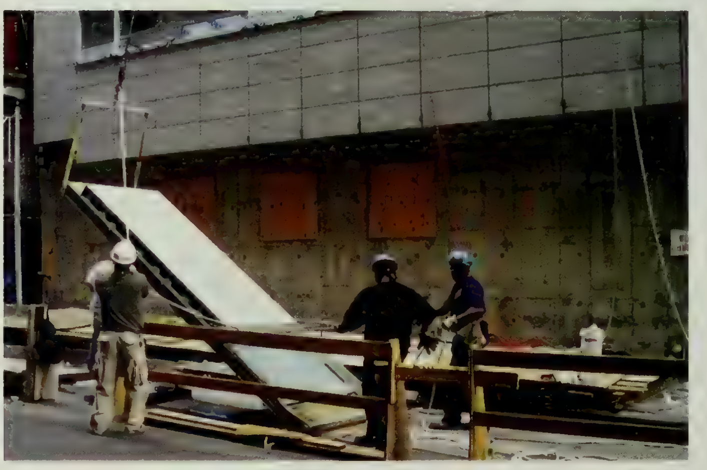
Each curtain-wall panel consists of windows, aluminum infill pieces, and stone units. The panels were fabricated onto a unitized aluminum frame in Canada (right) and then shipped to site. Contractors then lifted each panel into place and attached three steel tabs to steel clip angles affixed to the underlying concrete shell (below right). An early mock-up was made (below) to test the curtain wall before construction.







Reconfiguring the main entrance on Lafayette Street was key to achieving the architects' objective of transparency. The seven original concrete fins, rotated off-axis at 45 degrees, had the effect of screening the lobby from direct views, so visitors had a hard time finding the lobby from the street, and once inside, could not easily see outside. The interior was dark and defined by orange ceramic-tile floors and a heavy, suspended precast-concrete coffered-ceiling system, each coffer filled with lensed fluorescent fixtures. Finally, the underperforming mechanical system ensured that the lobby was also physically uncomfortable.

To address the fins, the structural engineer installed a temporary steel structure comprising a large beam and several columns that could support the cantilever of the building above. Once this was in place, the architects and engineers demolished the wedge columns and poured in place seven new columns, oriented on the grid of the building and perpendicular to the facade. "We had to poke holes in the third floor to pour the concrete down into the columns," Dietz says. The entrance was further enhanced by a new canopy that swings upward, floating off the new columns. By relocating a children's room from the immediate lobby to an adjacent space, the architects created a larger triangular lobby of 15,000 square feet that, coupled with a glass curtain wall, provides a "see-through" condition around the corner of the building and gives the lobby a unified 45-degree plan. Additionally, an ill-used light well into the basement along the south side of the building was covered over to provide a secondary grade-level entrance for staff.

To remediate the lobby's thermal comfort issues, the engineers designed a new mechanical system installed adjacent to the lobby at the front of the building. Louvers for supply air are tucked on the facade to the north side of the new entrance canopy. The architects further lightened the mood in the lobby with a new suspended ceiling of Makore wood configured in a triangular pattern within the original grid and punctuated at intersecting corners with downlights. The architects provided a new reflected ceiling plan for all contiguous lobby spaces, making the contrast between the renovated lobby and the first-floor waiting room—still in the original finishes—all the more jarring.

To renew or demolish

While Manhattan Family Courts represents a success story for Mitchell/Giurgola, especially since the firm's work on the building will continue with further interior renovations, the project is a study of how architects will have to adapt existing buildings as the original technology employed in constructing them becomes outmoded. The robust concrete structure, long held as a disastrous legacy of Brutalism, in fact argues for the renewal of the building through its ability to be easily adapted to changing circumstances. ■

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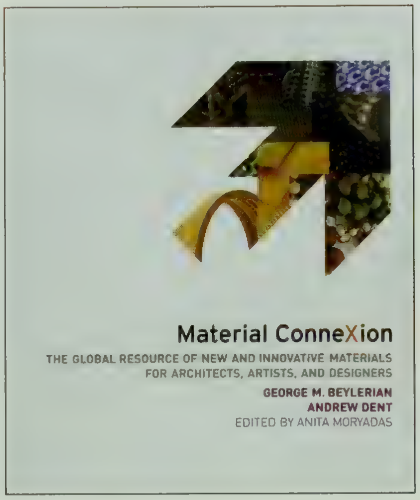
Practical, theoretical takes on materials

A comprehensive catalog on architectural materials would be almost unthinkable in print today given the ever-shifting landscape of design knowledge on the Internet. Instead, two of these new books explore particularly innovative materials, while the other offers a treatise on the methodology of materials itself. Russell Fortmeyer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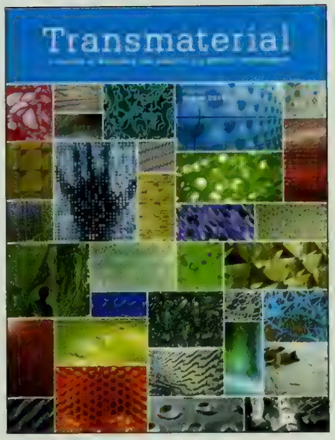


Transmaterial: A Catalog of Materials that Redefine Our Physical Environment, *edited by Blaine Brownell. New York: Princeton Architectural Press, 2006, 237 pages, $24.95.*

Material ConneXion: The Global Resource of New and Innovative Materials for Architects, Artists, and Designers, *by George M. Beylerian and Andrew Dent. Hoboken, N.J.: John Wiley & Sons, 2005, 289 pages, $80.*

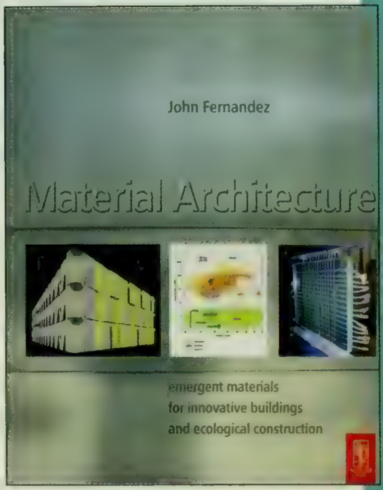
Transmaterial, edited by Blaine Brownell, avoids obsolescence by structuring itself around categories configured to provide architects some breathing room in the underappreciated realm of new materials. Brownell publishes the popular *Product of the Week* e-mail (transstudio.com/tm/), which feeds much of the material in the book.

Though still organized by the new CSI divisions, the author places each product or material in seven classes, such as multidimensional, recombinant, intelligent, or interfacial. It's a compact book, thankfully, so you won't have to second-guess yourself to find something like spherical micro-solar cells, used in building-integrated photovoltaics, under the minerals division, and further classified as an intelligent material.

Brownell's somewhat fuzzy system notwithstanding, *Transmaterial* is useful as a materials book for the architect who would never think of leaving such matters to a consultant, but instead would rather dive into the research directly.

While *Transmaterial* offers practical information, such as Web sites for each product manufacturer, *Material ConneXion* is much more of a beautifully illustrated thought-piece on the base materials themselves. The main author, George M. Beylerian, runs a subscription Web site and a consultancy that promote the use of new materials (www.materialconnexion.com). The book explains the properties of each material, leaving its use as an open-ended question for the designer. The book answers some of those questions by illustrating how a few of the materials have been applied to products or buildings, while also including testimony from some of today's most materials-conscious designers. All in all, this book is less a resource than an abstract mine of inspiration. *R.F.*

Material Architecture: Emergent Materials for Innovative Buildings and Ecological Construction, *by John Fernandez. Oxford: Architectural Press, 2006, 332 pages, $49.95.*


John Fernandez
Material Architecture
emergent materials for innovative buildings and ecological construction

If you are in search of a certain material for a specific design solution—say unusual cladding for the facade of a hospital, or environmentally friendly floor tile for a residential project—you are unlikely to find it in the pages of *Material Architecture*. However, if you are looking for a thoughtful and systematic approach to material evaluation and selection, John Fernandez's book should fit the bill.

Fernandez, an associate professor at the Massachusetts Institute of Technology, urges architects to consider the cultural, scientific, and environmental ramifications of material choices and provides many of the tools necessary. He examines material families such as metals, polymers, and composites, and discusses their development, the ecological impact of their manufacture and use, and physical properties such as tensile strength and thermal performance.

The book is thorough and scholarly but does not aim to provide the only criteria for selecting materials. It is intended to contribute to rather than replace "actual physical, tactile contact" with materials or "a deeply intuitive sense of [their] behavior or presence," says Fernandez. He advises architects to step outside their offices, interact with material experts, and visit manufacturers and fabricators.

Material Architecture is not easily accessible. Fernandez's text can be challenging, and the idiosyncratic graphs intriguing but difficult to decipher. However, even though it is demanding, readers interested in a new way of thinking about material selection should find this book well worth their effort. *Joann Gonchar, AIA*

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CONTINUING EDUCATION

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CONTINUING EDUCATION
Section: June 2006

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277-281 **Fiberglass Fenestration: A Durable, Sustainable, and Economic Alternative for Windows and Doors**

By Barbara A. Nadel, FAIA

Provided by Pella

LEARNING OBJECTIVES:

- Discuss the evaluation design criteria used by architects and owners when researching, designing, and specifying windows and doors
- Evaluate the comparative performance qualities of fiberglass composite against aluminum and vinyl windows
- Explain the characteristics of fiberglass composite that make it a durable and sustainable material
- Understand why fiberglass composite is ideally suited for fenestration under extreme thermal and environmental conditions

283-287 **Sustainability Rating Systems: Promoting Best Practices and Energy Efficiency**

By Barbara A. Nadel, FAIA

Provided by GBI

LEARNING OBJECTIVES:

- Understand how building design and construction contributes to energy consumption
- Evaluate sustainable design strategies to implement on building projects
- Understand the best practices that sustainability rating systems should address
- Learn how to use the Green Globes™ rating system to design, assess, and verify environmental performance of commercial buildings
- Understand why life cycle assessment (LCA) is critical to the objectivity of green building rating systems

289-293 **Green Building with Windows and Doors**

By Karin Tetlow

Provided by Marvin Windows and Doors

LEARNING OBJECTIVES:

- Be familiar with how windows and doors play a role in Green Building
- Understand how the features of windows and doors impact energy efficiency
- Have knowledge of standards and criteria that apply to specifying windows and doors for Green Building

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Fiberglass Fenestration: A Durable, Sustainable, and Economic Alternative for Windows and Doors

By combining the benefits of aluminum, vinyl, and wood windows, fiberglass composites provide aesthetics and longevity for any environmental condition.

Architect and photo credit: Walter Jacob Architects

Fiberglass composite windows are excellent for ocean front environments because they resist moisture, as shown at this multi-family housing project in Revere Beach, Mass.

Provided by Pella Windows

By Barbara A. Nadel, FAIA

Principal of Barbara Nadel Architect, in New York City, frequently writes about design and technology. She is the author and editor-in-chief of Building Security: Handbook for Architectural Planning and Design (McGraw-Hill, 2004).

Whether designing residential, commercial, or institutional building types, architects and owners carefully consider the qualities and long-term advantages of fenestration materials. Windows and doors provide essential protection and architectural character to a building, and must also respond to various owner-driven requirements, from aesthetics and cost, to performance, maintenance, and life cycle.

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Fiberglass Fenestration: A Durable, Sustainable, and Economic Alternative for Windows and Doors.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 281, then follow the reporting instructions on page 362 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Discuss the evaluation design criteria used by architects and owners when researching, designing, and specifying windows and doors.*
- *Evaluate the comparative performance qualities of fiberglass composite against aluminum and vinyl windows.*
- *Explain the characteristics of fiberglass composite that make it a durable and sustainable material.*
- *Understand why fiberglass composite is ideally suited for fenestration under extreme thermal and environmental conditions.*

Fenestration, or the arrangement, proportioning, and design of windows and doors in buildings, keeps occupants dry and protected from environmental elements, while providing sound insulation, thermal control, natural daylight, and ventilation, thereby contributing to indoor air quality and personal comfort. Collectively, these characteristics contribute to how building occupants perceive the quality of their interior spaces and overall environments.

Sustainability and energy efficiency also are increasingly important criteria during product research and selection for many architects and owners. As Leadership in Energy and Environmental Design (LEED®) certification, developed by the U.S. Green Building Council, becomes more widely implemented for various building types, maintaining healthy indoor air quality, attention to environmental concerns, and assessing energy production required for material manufacturing, are also reviewed during the design and specification process for public and private sector projects.

With these factors in mind, fiberglass composite is ideally suited for windows and doors in any climate, and almost all building types. More durable than aluminum or vinyl, with the thermal efficiency of wood, fiberglass composite windows are an economically competitive alternative to vinyl window products. The multiple advantages and benefits of fiberglass composite make it a versatile fenestration choice because of its strength, durability, low maintenance, energy efficiency, and sustainable qualities, as well as its resistance to corrosion, dents, and scratches.

This article will discuss the properties and evaluation criteria used by architects and building owners when designing and specifying windows and provide examples of fiberglass composite window applications.

Common Fiberglass Applications

Since the original patent of fiberglass was approved in 1946, the many uses of this material have increased substantially, attesting to its versatility under extreme environmental conditions. Fiberglass components are used in a variety of construction applications, in buildings, and on land and sea, which all capitalize on the inherent qualities of strength, durability, and moisture resistance. These characteristics make fiberglass composites the material of choice for different industries, and indicate why this material is ideally suited for fenestration.

For bridge, highway, and maritime components and panels, fiberglass offers low weight, high strength, long-term stability, and moisture resistance. Underground chemical storage tanks made of fiberglass must last over 50 years. At highways and roads, fiberglass sound barriers are often located between the roadway and residential areas as a stable, durable noise buffer. Roadway signs, and other highway elements with constant exposure to the elements, are an emerging use of fiberglass composite. Naval architects and engineers turn to fiberglass for boat construction and sea walls, because it withstands climate and water temperature extremes, and resists salt water corrosion.

> *More durable than aluminum or vinyl, with the thermal efficiency of wood, fiberglass composite windows are an economically competitive alternative to vinyl window products*

The following are some common industrial applications for fiberglass composite:

- **Automotive:** Fiberglass composite is used for bodies and bumpers, from cars to heavy commercial construction equipment, and armored vehicles. All of these are constantly exposed to climate extremes, and subjected to abusive wear and tear.
- **Boats:** Most boats are made of fiberglass, because of its ability to withstand the elements under heat and cold, and corrosion-resistant properties from salt water and atmospheric pollution.
- **Bridge and highway construction:** Bridge decking steel bars are being replaced with fiberglass, which has the strength of steel, but resists corrosion, a significant factor as steel prices rise. Other uses include: wide span suspension bridges requiring lower weight, highway guardrails, streetlight poles, and manhole covers, because of strength, light weight and durability.
- **Residential and institutional buildings:** Shower stalls, laundry and hot tubs, and extension ladders.

Fiberglass is suitable for wet zones in health care facilities because it can be cleaned daily and resists mold and mildew, which can readily appear in poorly ventilated bathrooms. "As a board certified hospital architect, I've always preferred fiberglass handicapped showers for patient areas. The seamless fabrication, controlled engineering tolerances, ease in cleaning, and efficient infection control make it the perfect product consistently designed to meet strict regulatory standards," says Orlando T. Maione, AIA, ACHA, principal, Maione Associates, Stony Brook, New York.

Fenestration Design Criteria

Regardless of climate, client, or building type, architects have specific design criteria in mind when selecting and specifying windows and doors for new construction, renovations or retrofits. "With increased demands by clients for energy efficient windows and doors, the measurement of thermal performance is important when specifying windows. Fenestration performance is critical in determining the overall energy efficiency of a building. Fiberglass windows and doors are a good solution for added thermal performance. Where noise is a problem, fiberglass windows and frames can reduce undesirable sound transmission," says Terrance J. Brown, FAIA, senior architect, ASCG, Inc., Albuquerque, New Mexico.

Retrofits and window replacement projects for older buildings sometimes pose challenge that don't arise during new construction. "When choosing windows, especially on retrofits of multi-family residential buildings constructed of brick, wood and stucco, I look for ease of installation, energy efficiency, moderate costs, maintenance, aesthetics, and durability. They make a substantial difference in fuel economy and sustainability," says Laurence E. Parisi, AIA, principal, Laurence E. Parisi, P.C. Architect, North Bergen, New Jersey.

Fiberglass Composite Technology

Fiberglass composite materials are strong and durable. In testing performed in accordance with the American Society of Testing and Materials (ASTM) testing standards, fiberglass composites displayed superior performance in strength, ability to withstand extreme heat and cold, and resistance to dents and scratches.

The structural core, consisting of glass fibers, is sandwiched between engineered layers of a structural mat, to optimize strength. During fiberglass production, the mat and glass fibers, known as rovings, are impregnated with heat-set resin and pulled through a die, a process known as pultrusion. Lastly, the fiberglass composite pultrusions are ideally painted with an environmentally friendly, durable surface coating, such as a powder-coat paint finish, or in some instances, with conventional, solvent-based paints or acrylic caps.

Material comparison of fiberglass composite, aluminum with thermal break, and vinyl.

	Fiberglass Composite	Aluminum with Thermal Break	Vinyl
Overall Performance	★★★★	★★★	★★
Strength	**Excellent** Eight times stronger than vinyl; twice as strong as aluminum.[1]	**Very Good**	**Fair** Becomes brittle over time.
Hot/Cold Performance	**Excellent** Withstands heat up to 200° F and cold to -40° F.	**Excellent**	**Fair** Warps, sags and softens in extreme heat; becomes brittle in extreme cold.
Thermal Expansion	**Excellent** Low expansion and contraction rate assures consistent, weathertight seal between sash and frame.	**Fair** High expansion and contraction rate may break seal between glass and frame.	**Fair** High expansion and contraction rate may break seal between glass and frame.
Impact Resistance	**Excellent** Withstands impacts without deformation	**Good**	**Fair**
Durability	**Excellent**	**Very Good** Potential for thermal break failure; prone to corrosion in seacoast environments.	**Good** Cannot be repaired easily if damaged
Energy Efficiency	**Excellent** Superior insulating properties, condensation resistance and U-values.	**Fair** Natural conductor, poor insulator. People seated by windows may be uncomfortable.	**Excellent**

★★★★ Excellent ★★★ Very Good ★★ Good ★ Fair

[1] In testing performed in accordance with ASTM testing standards, fiberglass composite has displayed superior performance in strength, ability to withstand extreme heat and cold, and resistance to dents and scratches.

Key Features and Benefits of Fiberglass Composites

The primary benefits of fiberglass composite windows and doors include:

- **Durable:** They are dent and scratch resistant, will not corrode or rot, are appropriate for coastal conditions, and exhibit great strength.
- **High performance:** These units provide excellent resistance to air and water infiltration, as well as high winds, and serve as sound barriers between outdoor and indoor spaces
- **Installation, operation and maintenance:** Fiberglass composite units typically arrive on-site pre-assembled and pre-finished, which makes them easy to install, and low maintenance over the long term.
- **Efficient:** These units have high R-values, which is a measure of resistance to the flow of heat through a given thickness of a material, as insulation, with higher numbers indicating better insulating properties.
- **Sustainable:** Fiberglass composites consume low embodied energy to produce, compared to aluminum and vinyl.
- **Thermally stable:** Fiberglass composite has a very low coefficient of expansion. As a result, it moves very little as the climate changes, resulting in less stress on the installation, seals, and glazing of the window or door. In addition, since fiberglass composite is very heat tolerant, it can be painted dark colors without concern for heat deformation.

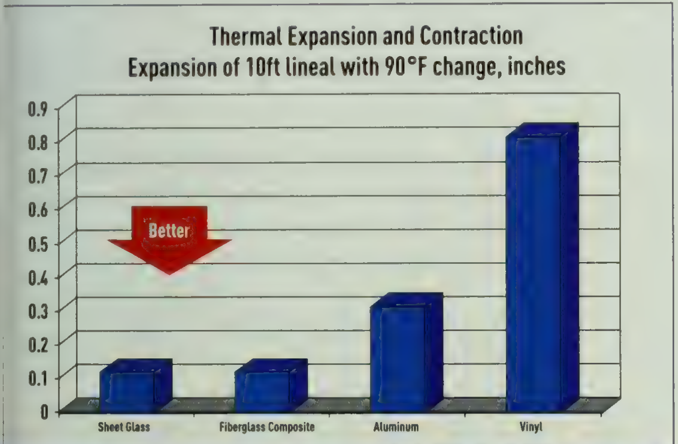

Table comparing thermal expansion of fiberglass composites with other materials

Material Comparison Analysis

Fiberglass composites combine the best and most desirable qualities from other materials, such as durable and low maintenance aluminum, energy efficient vinyl, and wood, with its aesthetic, high performance, and environmentally friendly properties. The net result is that fiberglass composite offers the durability of aluminum, the thermal efficiency of wood, and is an economic alternative to vinyl.

The following summarizes how fiberglass composite compares to aluminum with a thermal break, and conventional vinyl, in six categories.

- **Strength:** In ASTM testing, fiberglass composite material has excellent ratings, twice as strong as aluminum, and eight times stronger than vinyl. Aluminum was rated very good, while vinyl rates fair, because it becomes brittle over time.
- **Hot and cold performance:** Fiberglass composite rates excellent because it withstands heat up to 200 degrees Fahrenheit, and cold to -40 degrees Fahrenheit. Aluminum also rates excellent, but vinyl rates fair, because it warps, sags, and softens in extreme heat; and becomes brittle in extreme cold.

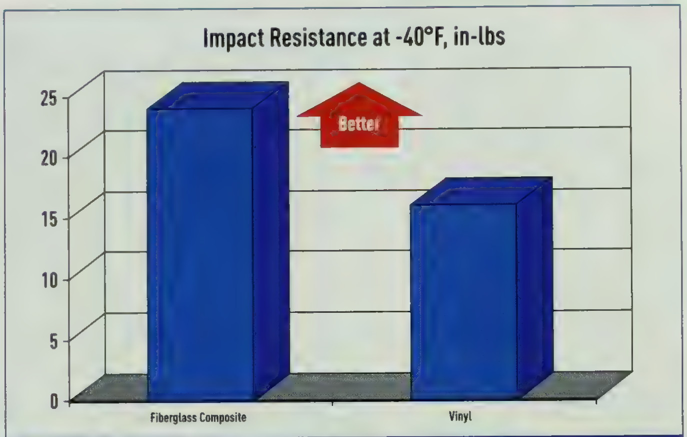

Table comparing impact resistance of fiberglass composite with vinyl

- **Thermal expansion:** Fiberglass composite's low expansion and contraction rate (similar to glass) ensures a consistent bond between sash and glass and a weathertight fit between the sash and frame. Aluminum and vinyl are considered only fair, because their high expansion and contraction rates (which differ substantially from the glass they hold) may compromise the air and water seal between glass and frame.
- **Impact resistance:** Fiberglass composite ranks high, because it withstands impacts without deformation. Aluminum and vinyl are rated good and fair, respectively. Aluminum dents and vinyl shatters quickly at low temperatures. Impact resistance is important on the job site during installation, when dents and damage may inadvertently occur.
- **Durability:** In addition to the inherent structural qualities, certain factory-applied finishes render fiberglass composite virtually indestructible, for an excellent rating. Aluminum rates a little lower at very good, because of the potential for thermal break failure, and it is prone to corrosion on seacoast environments. Vinyl rates good, because it cannot be repaired easily if damaged.
- **Energy efficiency** (pertains to windows and doors with Low-E insulating glass): Fiberglass composites rank high because of their excellent insulating properties, condensation resistance, and low U-values. (U-values are the inverse of R-values, with lower numbers indicating better insulating properties.) Aluminum rates fair, because it is a natural conductor, and a poor insulator. People seated near windows may be uncomfortable. Vinyl rates an excellent in this category.

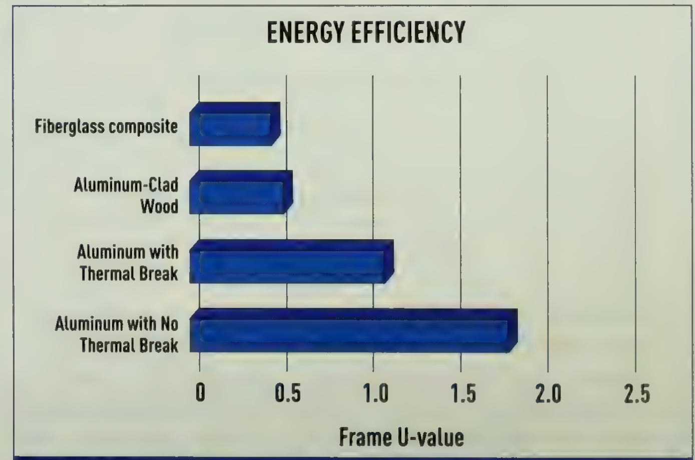

Table comparing energy efficiency of fiberglass composite with other materials

Photo: Courtesy of Pella Windows

Country Inn & Suites, Knoxville, Tenn., uses single-hung, fixed fiberglass composite windows. Architect: Cope Associates, Inc.

"Fenestration is a major source of energy loss and an ongoing maintenance concern. When window products respond to these needs, along with energy efficiency and durability, while still maintaining high aesthetic standards, architects have more viable options during the design process," observes Maione.

For areas prone to high winds and rain, design pressure is another consideration for architects and owners. An important criteria for me in selecting windows is the design pressure of the window," adds Brown, who chairs the AIA's Disaster Assistance program.

Fiberglass composite windows offer thermal performance that is superior to thermally-broken aluminum windows, plus design pressures up to 50 pounds per square foot (psf), the equivalent to 141 miles per hour (mph), glass not included. Strength of the glass must be calculated separately. Other design pressure technical criteria that must meet industry testing standards include structural performance, water infiltration rate, and air infiltration.

"For a large-scale multi-family development in the Northeast, where wide temperature swings are the norm, important window selection criteria includes limiting heat load to conserve energy in the summer, maximizing daylighting, and minimizing glare," says Jeremy Edmunds, Assoc. AIA, P.E., LEED-AP, sustainability advisor, Cherokee Northeast, New York, New York.

Fiberglass composite also compares well to vinyl and aluminum in product life cycle, aesthetics, and performance.

- **Life cycle:** Fiberglass composite is long lasting, and is a strong, durable fenestration material.
- **Appearance:** Various finishes are available to achieve different looks. Options include a powder-coat paint finish, with a textured substrate for a wood look, to conventional pultrusion, whether wet-painted or acrylic-capped, which tends to look more like plastic.
- **Performance:** Based on certification from stringent industry testing standards, fiberglass composite fenestration has a superior performance in any environment.

When assessing the aesthetic appeal of windows, design professionals and building owners also consider the life cycle costs and benefits of material selection. As a durable, economical, high performance material with a long life cycle, fiberglass has several advantages, whether for restorations or replacement windows. Vinyl windows look plastic, while fiberglass exhibits a smooth, consistent, aesthetic finish.

"The problem with many early fiberglass windows is that they didn't match the sturdy appearance of solid wood windows, the industry standard for most applications. However, the latest generation of fiberglass composite windows address this important aesthetic issue. As a result, they have become a viable alternative, particularly when extreme weather environments are at play: they don't rust and they are energy efficient," says Anthony S. Barnes, AIA, principal, Barnes Vanze Architects, Inc., Washington D.C.

CASE STUDIES

Fiberglass composite fenestration products are suitable for all building types, including hotels, multi-family housing, university buildings and dormitories. The following projects illustrate how fiberglass composite windows have been successfully installed in various applications.

Tennessee Hotel: A Win-Win Situation

At the Country Inn & Suites, in Knoxville, Tennessee, single-hung, fixed fiberglass windows were selected, primarily for cost, but also due to long-range maintenance issues. According to Lanny Cope, AIA, president, Cope Associates, Inc., Knoxville, Tennessee, fiberglass composite was selected over aluminum windows because aluminum can scratch during installation, while fiberglass doesn't.

"Both perform relatively equal, but for us, the first cost for fiberglass windows was lower than for aluminum. The owner was so happy with the fiberglass composite windows, he wants to use them again on another hotel project. The builder liked them because of the ease of installation, and they didn't have to be as careful regarding scratching. For the architect, it's a win-win situation, and for the owner, the product does the job for less cost than an alternative selection," Cope says.

New England Multi-Family Residence: A Quiet, Coastal Design Solution

For this Art Deco-themed residential project on the New England coastline in Revere Beach, Massachusetts, a Boston suburb, the architect looked at budget, energy, durability, and acoustics during his window selection research. "We reviewed wood, vinyl-clad, and aluminum windows. Fiberglass windows are relatively new on the market, and we were among the first to use them. Fiberglass composite met our needs for size and configuration," says Walter Jacob, RA, principal, Walter Jacob Architects, Marblehead, Massachusetts.

The waterfront project, which contains 48 residential lofts, most with full ocean views and coastal exposure, is located under the flight path of nearby Logan Airport. Along with planes flying overhead, noise from trains and the street warranted an acoustic consultant to suggest ways to reduce noise levels within the units. "Our analysis found a competitive advantage for fiberglass composite based on cost, and meeting local energy code requirements. To our surprise, the sound qualities contributed quite a bit. We were able to get a lot of design mileage on a budget," Jacob adds. The project is slated for mid-2006 completion.

Nebraska College Campus Dormitories: Design for Durability

At Dana College, a small private campus in Blair, Nebraska, the college president wanted a residential, not institutional, character for the new dormitories. Due to the nature of a typical student population, and previous window problems on campus, durability and abuse resistance were important design criteria, along with budget constraints and energy efficiency.

"Fiberglass windows satisfied these needs, and provided flexibility in design, color selection, and custom muntin patterns. The suite-style student housing has sliding glass windows, and the college president's design goals were met, within our budget," said Steven Weber, AIA, project architect, RDG Planning and Design, Omaha, Nebraska. The project is scheduled for mid-2006 completion. ■

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at ***http://www.archrecord.com/resources/conteduc/archives/0606pella-1.asp.*** To receive AIA/CES credit, you are required to read this additional text. The quiz questions below include information from this online reading. To receive a faxed or emailed copy of the material, Contact Pella Commercial at: 800-84-PELLA or www.pellacommercial.com or E-mail: commercial@pella.com

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Discuss the evaluation design criteria used by architects and owners when researching, designing, and specifying windows and doors.*
- *Evaluate the comparative performance qualities of fiberglass composite against aluminum and vinyl windows.*
- *Explain the characteristics of fiberglass composite that make it a durable and sustainable material.*
- *Understand why fiberglass composite is ideally suited for fenestration under extreme thermal and environmental conditions.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 362. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. Industrial applications for fiberglass composite include all but which of the following?
- **a.** Wide span suspension bridges
- **b.** Extension ladders
- **c.** High strength textiles and mesh fabrics
- **d.** Underground chemical storage tanks

2. In testing performed in accordance with the American Society of Testing and Materials (ASTM) standards, fiberglass composites display all but which of the following attributes?
- **a.** Strength
- **b.** High thermal conductivity
- **c.** Ability to withstand extreme heat and cold
- **d.** Resistance to dents and scratches

3. Characteristics of fiberglass composite windows and doors include which of the following?
- **a.** High impact resistance
- **b.** High rate of sound transmission between indoor and outdoor spaces
- **c.** High coefficient of expansion
- **d.** Will corrode and warp under prolonged humid conditions

4. Fiberglass composite is considered an environmentally friendly material because it
- **a.** Melts easily and can be recycled
- **b.** Uses low embodied energy to produce
- **c.** Withstands heat up to 240 degrees Fahrenheit and cold up to -200 degrees Fahrenheit.
- **d.** Is made through the process of extrusion

5. Window performance criteria for fiberglass composite fenestration typically include which of the following?
- **a.** U-value of the glass but not the frame
- **b.** Design pressure and air infiltration
- **c.** Bird impact rating
- **d.** Weight of the total unit and absorption rate

6. Fiberglass composite fenestration has high energy efficiency ratings because it:
- **a.** Is a natural conductor
- **b.** Has low resistance to condensation
- **c.** Has low U-values
- **d.** Has a high rate of sound transmission

7. What is pultrusion?
- **a.** The transmission rate of loud noise through a window unit
- **b.** The impact of a strong blast on exterior windows
- **c.** A manufacturing process for aluminum windows
- **d.** The process by which fiberglass is made

8. Thermoset describes the qualities of which materials?
- **a.** Polyvinylchloride and vinyl
- **b.** Steel and concrete
- **c.** Fiberglass composites with resin
- **d.** Aluminum and brass

9. Available options for fiberglass composite fenestration finishes include all but which of the following?
- **a.** Gelcoat
- **b.** Powder-coat paint
- **c.** Solvent-based paint
- **d.** Acrylic cap

10. When construction sequence requires that the windows be installed from inside the building or after the wall system is completely constructed, which of the following frame types would be used?
- **a.** Integral nailing fin
- **b.** Flush flange frame
- **c.** Block frame with nailing fin
- **d.** Block frame with installation clips

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Sustainability Rating Systems:
Promoting Best Practices and Energy Efficiency

Easy to use online sustainability rating systems are educational tools that address all project phases.

Provided by Green Building Inititive
By Barbara A. Nadel, FAIA

Green building, or sustainable design and construction, is a growing element of the global economy, in projected market share, and heightened public awareness. From building owners, architects, engineers, construction managers, and government agencies to the mainstream media and energy-consuming public, the business of green is now an important economic and social policy issue.

Rising energy costs impact all aspects of the building industry, from availability, transport, and processing, to demolition, recycling, and disposal of building construction materials. Buildings and their construction account for half of all greenhouse gas emissions and energy consumption in the U.S. annually. This includes energy used in the production and transportation of materials to building construction sites, and energy used to operate buildings. Globally, the percentage is even greater. Buildings are the primary source of demand for energy and materials that produce by-product greenhouse gas.

"As of 2005, buildings account for 48 percent of U.S. energy consumption and generate far more greenhouse gas emission than any other sector," says R.K. Stewart, FAIA, principal of Gensler, San Francisco, and 2006 AIA First Vice President/2007 President Elect. Transportation accounts for 27 percent, and industry for 25 percent, respectively. "Architects must accept responsibility for our role in creating the built environment, and encourage our clients and the design and construction industry to join us in developing measurable changes that will improve the quality of life." To ensure results, AIA supports the development and use of rating systems and standards that promote a more sustainable environment.

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Sustainability Rating Systems: Promoting Best Practices and Energy Efficiency.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 287, then follow the reporting instructions on page 366 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Understand how building design and construction contributes to energy consumption.*
- *Evaluate sustainable design strategies to implement on building projects.*
- *Understand the best practices that sustainability rating systems should address.*
- *Learn how to use the Green Globes™ rating system to design, assess, and verify environmental performance of commercial buildings.*
- *Understand why life cycle assessment (LCA) is critical to the objectivity of green building rating systems.*

Architect: Weber + Thompson.
Photo courtesy of GBI.

The Blakely Hall Community Center, Issaquah, Washington, is the first U.S. building to receive a sustainability certification under the Green Globes™ rating system.

Public and private sector owners and managers increasingly are reviewing the benefits and potential savings of green building and sustainable practices. The challenge of implementing sustainability into the built environment has provided new marketplace opportunities, from green building products and college programs, to sustainability rating systems.

This article will explore sustainability principles, implementing best practices, and applying sustainability ratings to create energy efficient commercial and residential construction, such as when using the Green Globes™ system.

Energy Consumption

According to the U.S. Environmental Protection Agency (EPA), in 2002, buildings accounted for 39 percent of total U.S. energy consumption. Residential structures accounted for 55 percent of that total, while commercial buildings accounted for the other 45 percent. These statistics have risen steadily since then.

The AIA, along with other building industry organizations, has endorsed sustainability and the goals of lowering energy consumption and greenhouse gas emissions, which contribute to climate change. In December 2005, the AIA adopted two policies, endorsing sustainable architectural practice, and the development and use of rating systems and standards that promote and contribute to a sustainable future.

The AIA's sustainability goals support resource conservation to achieve a minimum reduction of 50 percent of the current consumption level of fossil fuels used to construct and operate buildings by the year 2010. Just as importantly, integrating sustainability into the curriculum for architectural continuing education activities relating to professional licensure, and within architectural schools, will result in an emerging core competency within the established design criteria for current and future U.S. architects.

Changing the mindset of the building industry, facility owners, and the public towards accepting the benefits of greener future is a long-range undertaking. At least 10 to 15 years, an entire generation of graduates, may be needed to educate owners and government agencies about the benefits of sustainability principles.

To make an impact, there must be greater use of renewable energy sources and the use of innovative design principles to improve environmental performance. Since energy consumption reductions will be realized over the entire building life cycle, architects and owners must look beyond first impacts associated with construction, and consider operational and life cycle ramifications. "It's time to require specific goals for significant reductions in energy use, with enhanced performance assured through building commissioning," Stewart adds.

Sustainable Rating Systems

The marketplace has traditionally welcomed innovation and consumer choice, from automotives and soft drinks, to computer software and health care plans. Even in industries where a single product or brand tends to dominate the market, other options always emerge to meet consumer needs.

Increasingly, private nonprofit groups, companies, organizations, public agencies, and educational institutions are developing sustainability guidelines and rating systems to meet their requirements, budgets and schedules, rather than relying on a one-size-fits-all standard. When the marketplace develops different sustainability rating systems in response to consumer preferences, more design professionals and building owners are likely to implement sustainability principles.

> ***"Sustainability ratings should be developed as a collaborative, consensus building process, with designers, manufacturers, and contractors," says Stewart.***

"There are a number of standards out there, and architects must understand how they are derived, so they can better use them. Architects must learn to address the important characteristics of these standards, work with various groups to promote them, and help craft them to meet architectural concerns. Sustainability ratings should be developed as a collaborative, consensus building process, with designers, manufacturers, and contractors," says Stewart.

> ***The building industry must deal with the entire spectrum of building life span and operations. Regulations still don't address energy concerns over a building's 50-year life cycle.***

From a regulatory perspective, a two-pronged approach is needed, Stewart adds. Regulations at the federal, state, and local levels may require certain goals to be met, and standards to be implemented. At the same time, creating incentives for the building industry to go beyond the minimums may provide an additional push for regulations and mandated standards.

"Changing behavior is difficult, but we can offer incentives to advance sustainability, and back up good practice with legislation and regulations," Stewart adds. "In California, energy standards are only one part of public policy, relating to climate change. The building industry must deal with the entire spectrum of building life span and operations. Regulations still don't address energy concerns over a building's 50-year life cycle. It is difficult to assess the energy consumed on a project, from extracting raw materials, to transporting them, and preparing them for processing. Architects can't always judge the environmental impact of specifying materials made locally over those brought in from a distance. Life cycle analysis addresses these bigger issues."

Clients and building owners often focus on first costs over long-term costs, especially with limited multi-year public appropriations or private funds providing fixed project budgets. One solution, Stewart observes, may lie in the financial markets, and how they view sustainability over traditional construction methods. "Once we get the financial markets to recognize greater dollar values on projects with lighter environmental impact, they may be more inclined to see the inherent benefits," he adds.

Best Practices and Sustainability Rating Systems

The principles included in the AIA policy on sustainability rating systems comprise a compendium of best sustainable practices that rating systems should ideally address. Green building rating systems, standards, or regulations for the design and construction industry should encompass the following:

1. Be developed and renewed regularly, through a consensus-based process, in which all interested parties can participate
2. Require clearly defined design documentation to demonstrate compliance
3. Require compliance to be validated by an independent third party
4. Require the development of sustainable sites, while avoiding conversion of prime agricultural lands or wetlands, regenerating brownfield sites, or those that result in regenerative benefits to the natural environment
5. Require specific goals in the efficient use of water resources, that promote use of new wastewater technologies
6. Require goals for energy use reduction, especially non-renewable energy sources, with enhanced performance assured through commissioning of building systems
7. Promote the use of renewable energy sources
8. Require reduced use of non-renewable natural resources through the reuse of existing structures and materials, reduction in construction waste, promotion of recycled content materials, and use of materials independently certified as from sustainable sources
9. Require goals for improved indoor air quality (IAQ) through enhanced IAQ, thermal comfort, acoustics, daylighting and pollutant source control, and use low emission materials and building system controls
10. Promote the development and application of innovative designs and collaborative processes to improve environmental performance
11. Recognize the life cycle value of a community or project in addition to construction first costs, including assessment on climate change, acid rain, water pollution, resource depletion, and toxicity factors
12. Use life cycle assessment data as the basis for design and construction decision making
13. Acknowledge national, regional, and bio-climatic differences
14. Reduce (and eventually eliminate) on-site and off-site toxic elements in the built environment
15. Require specific measurable reductions in CO2 production in the built environment
16. Require documentation of actual building energy and operational performance

Educating Students, Emerging Architects and Future Business Leaders

Changing the ways of professional practice and how people perceive sustainability is part of the challenge facing the building industry, nonprofit green groups, and sustainability advocates. Academia, too, is grappling with how to integrate sustainability into architectural education. But architects are only one of many professional disciplines who ultimately will make decisions about the business of green design.

uilding owners, engineers, financiers, lawyers, vernment administrators, elected officials, and ilding industry members play significant roles in omoting, paying for, and adopting sustainability inciples, rating systems, guidelines, and andards, along with architects.

tudents and young architects are more ggressive about embracing sustainability inciples," states Stewart. Multi-disciplinary ademic programs available to those in and tside schools of architecture can effectively ducate tomorrow's business leaders and ture clients.

> *"Emerging architects understand the benefits of sustainability goals. It may be a hard sell for some clients, but in a world of scarce resources and a growing body of evidence pointing to the need for energy conservation, this is the future of the building industry," says Jeremy Edmunds, Assoc. AIA, P.E., LEED-AP*

merging architects understand the benefits of stainability goals. It may be a hard sell for some ients, but in a world of scarce resources and a owing body of evidence pointing to the need for energy conservation, this is the future of e building industry," says Jeremy Edmunds, Assoc. AIA, P.E., LEED-AP, sustainability dvisor, Cherokee Northeast, New York, New York, and 2006 National Associate epresentative to the AIA Executive Committee.

bout the Green Building Initiative

e Green Building Initiative (GBI) is a not-for-profit organization established to accelerate een building among mainstream practitioners. GBI encourages increased education that ill result in sustainable design and construction practices. In early 2005, GBI introduced e Green Globes™ environmental assessment and rating system, an online tool for ssessing sustainable design criteria, to support these goals.

BI consists of a network of design and construction industry leaders committed to stainable design. The mission includes adoption of building practices that result in ergy-efficient, healthier and environmentally sustainable buildings, with a focus on sidential and commercial design and construction. In addition to overseeing Green lobes™ in the U.S., GBI works with Home Builder Associations to develop green building ograms for the residential market based on the National Association of Home Builders odel Green Home Building Guidelines.

BI is governed by an independent board of directors comprised equally of producers uilding material suppliers), users (architects, engineers and builders) and interested ird parties (academics and non-governmental organizations). Details on the GBI board nd lists of supporting and associate members are available at www.thegbi.org.

volution of Green Building Rating Systems

lthough relatively new to the U.S. market, Green Globes™ is the product of over nine years f research and refinement, beginning in 1996 when its forerunner, the Building Research stablishment Environmental Assessment Method (BREEAM), was adapted in Canada. ubsequently, the Canadian system underwent various iterations, becoming BREEAM Green eaf in 1999 and Green Globes™ in 2002.

hen GBI acquired the rights to distribute Green Globes™ in the U.S., it made a ommitment to continued improvement, to ensure the system reflects ongoing best ractices in sustainable design. Changes required for adapting Green Globes™ to the U.S. arket covered units of measurement, U.S. versus Canadian references, and the corporation of U.S. programs, such as the EPA Target Finder. After pilot testing, GBI added n-site inspection as an essential part of the verification process, to strengthen the ystem's effectiveness and credibility.

In 2000, the Green Globes™ developers created a streamlined, user-friendly system, and converted the paper-based assessment to an online version. Although green building was not as widely accepted or used in Canada at the time, public agencies and the building industry expressed increased interest in energy efficient design opportunities, and ways to assess them. As an online tool with an affordable cost, the Green Globes™ rating system was thus available to a wider audience seeking ways to implement environmental design.

In Canada, Green Globes™ is one of two green building rating systems, along with Leadership in Energy and Environmental Design (LEED®), from the U.S. Green Building Council (USGBC), recognized by the Canadian government. Under the trade name *Go Green Plus*, Green Globes™ is also the basis of the Building Owners and Managers Association (BOMA) of Canada's national energy and environmental program for existing buildings, which the Canadian federal government recently adopted for its entire real estate portfolio.

A Market Alternative

The major green building standards and rating systems have more similarities than differences. However, the Green Globes™ system has several unique characteristics that make it attractive to those seeking a flexible, practical, affordable option.

In addition to an assessment protocol and rating system, Green Globes™ serves as a design tool, suggesting improvements and guiding the integration of green principles throughout the design process. Web-based and fully interactive, the system allows users to update online information for a year, and compare multiple buildings within a portfolio. As more buildings are Green Globes™ rated, point scores will be aggregated in an anonymous database, enabling users to analyze how projects perform against the median as well as buildings that are similar in size, type, and region.

As with other ratings and standards, Green Globes™ enables projects to be recognized as environmentally superior through third-party verification. In 2006, each Green Globes™ assessment costs $500. To have a building third-party verified, there is an average additional cost of approximately $4,000 to $5,000, which includes a conditional verification at the construction documents stage and final verification following an on-site inspection.

ANSI Accreditation

GBI was the first green building organization to seek and receive accreditation as a standards developer by the American National Standards Institute (ANSI), and has begun the process to establish Green Globes™ as an official ANSI standard. This effort is expected to be completed by 2008. The ANSI process is consensus-based and will involve further development of the system through a multi-stakeholder technical review. As per ANSI rules, the first 15 members of the technical committee were selected by the GBI board of directors and asked to self-populate to 30. Details on the committee, which functions independently of the GBI board and staff, are available at www.thegbi.org.

Life Cycle Assessment (LCA)

As the ANSI process proceeds, GBI has initiated a process to further incorporate life cycle assessment (LCA) into the Green Globes™ system. The intent is to simplify sustainable practices by suggesting alternatives with scientifically based choices. The system currently incorporates LCA in the resource section. As sustainable practices become widely accepted, rating systems should evolve away from prescriptive (subjective) scoring, towards a greater reliance on quantitative and objective data, giving rise to systems that reward performance results, instead of the means to achieve them.

As a first step, GBI has commissioned an engineering firm to assess and rank building assemblies, such as complete wall or roof assemblies, using established LCA methodology. The intent is that design teams will be credited within the Green Globes™ system for using highly ranked assemblies. The UK's BREEAM system uses this approach successfully by drawing upon assembly rankings in its Green Guide to Specifications.

Another objective of the LCA incorporation is to establish a relative basis from which progress can be measured. Green Globes™ incorporates benchmarking for operating energy and water use, with a score based on how well a building performs against the benchmark. A similar capability will be established for comparing and scoring LCA results.

The Evaluation Process

In the U.S., Green Globes™ modules are available for new construction and renovation projects. The system is based on a series of questionnaires that relate to seven areas of assessment: project management, site, energy, water, resources, emissions/effluents and other impacts, and indoor environment.

Depending on the building, users work through up to eight project delivery modules that correspond to project phases, from pre-design, schematic design, construction documents, construction, and commissioning. Although evaluation can occur at any time, the system is designed to facilitate planning by providing detailed reports at two key stages, schematic design and construction documents.

At the schematic design stage, which often corresponds with planning approval, the system generates a preliminary score and suggests changes (where applicable) that will improve the building's performance and ultimate rating.

A final score is provided at the construction documents stage, which usually corresponds with building permit approval.

Both evaluation documents are written in plain language, to facilitate communications among the design team and owners or developers, contractors, future occupants, and others. These evaluations allow municipal authorities to verify that environmental claims are met as the project proceeds.

The data submitted must be substantiated by a third-party verifier, typically a licensed engineer, architect or building science expert, trained in the Green Globes™ system, before a final rating is given.

The verification process is completed in two phases. Once the construction documents questionnaire is complete, it is verified against the documentation generated throughout the design process, including construction specifications, working drawings, evidence of energy and life cycle modeling, and support materials, such as waste management plans. This phase results in a conditional assessment. Final verification occurs post-construction and includes an on-site inspection by the third-party verifier.

Once an assessment is verified by a qualified third party, projects achieving a score of 35 percent or more receive a Green Globes™ rating based on the percent of total points achieved.

85-100%	● ● ● ●	Reserved for select building designs that serve as national or world leaders in energy and environmental performance. The project introduces design practices that can be adopted and implemented by others.
70-84%	● ● ●	Demonstrates leadership in energy and environmental design practices and a commitment to continuous improvement and industry leadership.
55-69%	● ●	Demonstrates excellent progress in achieving eco-efficiency results through current best practices in energy and environmental design.
35-54%	●	Demonstrates movement beyond awareness and commitment to sound energy and environmental design practices by demonstrating good progress in reducing environmental impacts.

Green Globes Ratings: Projects achieving a score of 35 percent or more receive a Green Globes™ rating based on the percent of total points achieved.

CLICK FOR ADDITIONAL REQUIRED READING

The article continues online at ***http://www.archrecord.com/resources/conteduc/archives/0606gbi-1.asp.*** To receive AIA/CES credit, you are required to read this additional text. The quiz questions below include information from this online reading. To receive a faxed or emailed copy of the material, Contact GBI at: 877.GBI.GBI1 or www.thegbi.org or E-mail: info@thegbi.org.

AIA/ARCHITECTURAL RECORD
CONTINUING EDUCATION Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Understand how building design and construction contributes to energy consumption.*
- *Evaluate sustainable design strategies to implement on building projects.*
- *Understand the best practices that sustainability rating systems should address.*
- *Learn how to use the Green Globes™ rating system to design, assess, and verify environmental performance of commercial buildings.*
- *Understand why life cycle assessment (LCA) is critical to the objectivity of green building rating systems.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 366. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. In 2005, buildings accounted for:
  a. Less greenhouse gas than any other market sector
  b. 48 percent of U.S. energy consumption
  c. No impact whatsoever on climate change
  d. 27 percent of U.S. energy production

2. Best practices to be included in sustainability rating systems include all but which of the following?
  a. Promoting use of renewable energy sources
  b. Use of life cycle assessment data
  c. Approval by local building code officials
  d. Enhanced indoor air quality

3. Which of the following is not associated with the Green Globes™ rating system?
  a. Ability to modify inputs for one year
  b. A project technical coordinator
  c. Third-party verification
  d. Web-based assessment

4. Under the Green Globes™ system, projects can earn up to how many points?
  a. 50
  b. 100
  c. 500
  d. 1000

5. The Green Building Initiative was the first green building organization to receive accreditation as a standards developer by which group?
  a. American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE)
  b. U. S. Environmental Protection Agency (EPA)
  c. American National Standards Institute (ANSI)
  d. Building Owners and Managers Association (BOMA)

6. An integrated design process encourages:
  a. Seamless integration of computer modeling
  b. Multi-disciplinary collaboration from the earliest stages of a project
  c. Completion of the design process within a certain schedule
  d. Site design decisions to be made at the end of the design development phase

7. Which of the following is not an evaluation factor for most sustainability ratings?
  a. Reduced energy consumption
  b. Clearly defined design documentation to demonstrate compliance
  c. Reduced use of toxic elements in the built environment
  d. On-site environmental engineer

8. The Green Globes™ system generates a numerical point score at which two critical stages:
  a. Construction and commissioning
  b. Schematic design and construction documents
  c. Construction documents and commissioning
  d. Pre-design and construction

9. Life cycle assessment is important because it does all except which of the following?
  a. Establishes a relative basis against which progress can be measured
  b. Reduces subjectivity by relying on quantitative and objective data
  c. Clarifies alternatives and facilitates informed, scientifically based choices
  d. Assumes a 30-year building life cycle

10. Before a project can be promoted as Green Globes™ rated, the assessment must be:
  a. Third-party verified
  b. Approved by municipal authorities
  c. Printed in triplicate on recycled paper
  d. Stamped by a registered architect

GREEN BUILDING INITIATIVE™

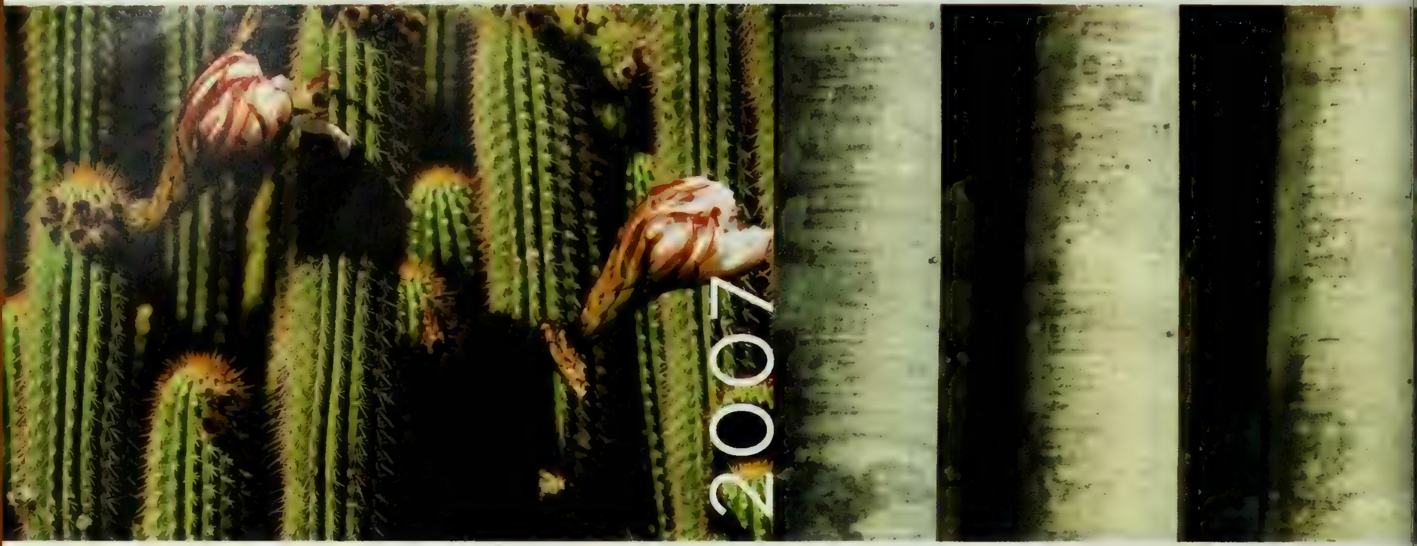
GREEN GLOBES

The mission of the Green Building Initiative is to accelerate the adoption of building practices that result in energy-efficient, healthier and environmentally sustainable buildings by promoting credible and practical green building approaches for residential and commercial construction.

CIRCLE 123 ON READER SERVICE CARD OR GO TO ARCHRECORD.CONSTRUCTION.COM/PRODUCTS/

AIA 150

High Performance Buildin
and Sustainable Design
Grows with the Sharing
of Experience



convention 2007

May 3-5 / San Antonio

Every aspect of architecture represents an opportuni
architects to integrate sustainable design concepts t
efit their communities. The AIA 2007 National Conve
explores the theme of **Growing Beyond Green** in the
subject areas:

- Design
- Building Performance
- Practice
- Leadership

Proposals are now being accepted for pre-conventio
workshops and convention seminars. If you are at the
forefront of sustainable design, the AIA invites you to
share your knowledge and experience.

Download the Call for Presentations (PDF) and subm
proposal online at *www.aia.org/conted_convention*.

Submissions deadline is July 1, 2006. Selections will
made by September 30.

Growing Beyond Green will be understood as a perp
journey not a destination. Restorative and Regenerati
approaches to High Performance Building will be exp
as one of the many opportunities for our members a
Architects to embrace the continuing challenges for
profession into the future.

CALL FOR
PRESENTATIONS

Building Green with Windows and Doors

With the growth of Green Building, windows and doors ake on an increasingly significant role for occupants' well-being and energy efficiency.

rovided by Marvin Windows and Doors

y Karin Tetlow

Gone are the days when merely specifying insulating glass was enough to satisfy a demand for energy efficient windows and glass-paneled doors. Now, with Green Building going mainstream, knowledge of glazing, coatings and framing options is ssential for new construction. Furthermore, with the growing number of projects achieving .S. Green Building Council (USGBC) LEED™ (Leadership in Energy and Environmental esign) certification many more architects are needing to pay special attention to windows nd doors as they plunge into the sometimes complex practice of calculating LEED points. lready, 360 buildings have earned LEED certification, while 3,775 buildings are EED registered.

ne key characteristic of the current Green Building movement is quantification made ossible by today's computers. Delivering proof of efficiencies is the most significant ifference between today's Green Building and the solar movement of the 70s, notes USGBC oard member Murray Levi, AIA LEED. Equally significant is the current holistic approach hich emphasizes all aspects of a project's impact on the site/environment/energy onsumption/materials and processes, says Paul S. Alter, AIA, principal, Lee H. Skolnick rchitecture + Design Partnership. Green Building now includes far more than data and erformance of the building and the individual items that comprise it. Occupants' comfort, ell-being, air quality, daylight and views are other issues that impact Green Building and re critically important when designing for the unique needs of children.

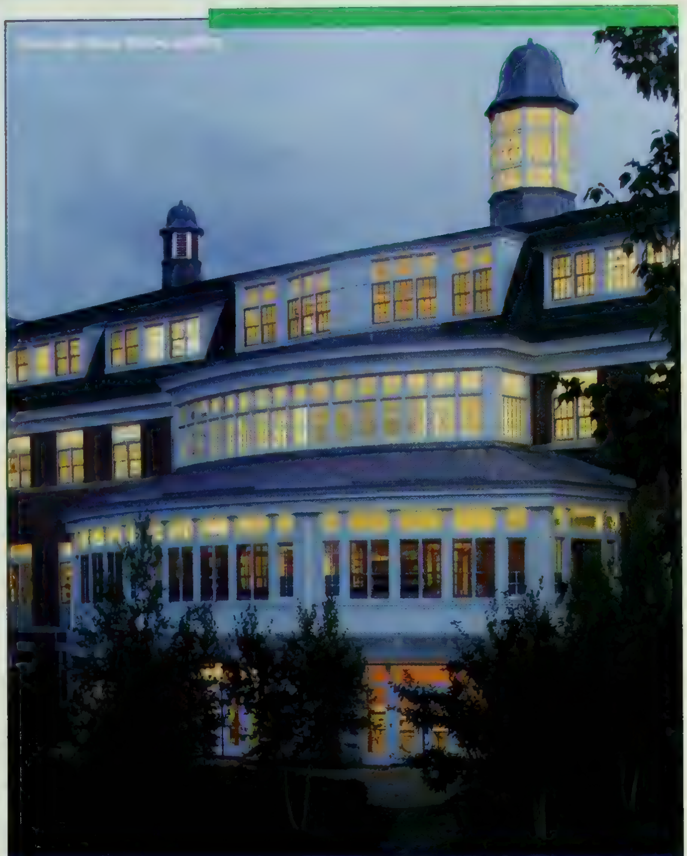
CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Building Green with Windows and Doors.** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 293, then follow the reporting instructions on page 364 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Be familiar with how windows and doors play a role in Green Building.*
- *Understand how the features of windows and doors impact energy efficiency.*
- *Have knowledge of standards and criteria that apply to specifying windows and doors for Green Buildings.*



Salisbury School Centennial Library and Humanities Building designed by The Office of Michael Rosenfeld, Inc., Architects. Argon-filled, low-E coated insulating glass windows have extruded aluminum cladding.

A product can be energy efficient in performance, but environmentally harmful in manufacturing and disposal. Life Cycle Analysis (LCA) attempts to quantify the impact of a product or building over its complete lifecycle from acquisition of raw materials, product manufacturing process and performance through demolition and reuse, recycling or disposal. Currently there is a lack of data to feed into software tools to allow for an LCA on the overwhelming majority of building products, including windows and doors. Yet, given the industry's commitment to Green Building, LCA will most likely be implemented at some time in the future—as it already has been by some automobile companies in Europe. Meanwhile it offers a strong mindset model when researching and specifying building products, materials and methods—and responding to the increasing number of clients who demand the spirit of green if not the certification of a LEED project.

Designing for Energy Efficiency and Sustainability

LEED projects and good practice generally employ energy modeling as a basis for predicting building performance. An example is the Wind NRG Partners Manufacturing Facility in Hinesburg, VT; a Gold LEED certified project designed by William Maclay Architects and Planners, which has won several awards including recognition as a Psychologically Healthy Workplace from the Vermont Psychological Association. Completed in August 2004, the building includes a comprehensive daylighting scheme and operable windows in all spaces. The company expects to recoup the additional cost of construction to green standards ($13.81 per square foot or 8.21 percent) within just five years. Beyond the easy-to-calculate energy savings, however, expected long-term benefits include higher employee productivity, reduced absenteeism, and lower turnover, advantages that further will boost the company's bottom line.

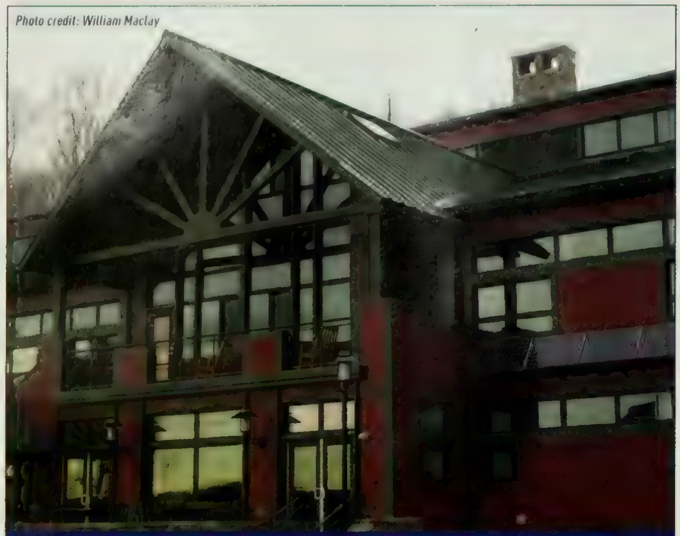
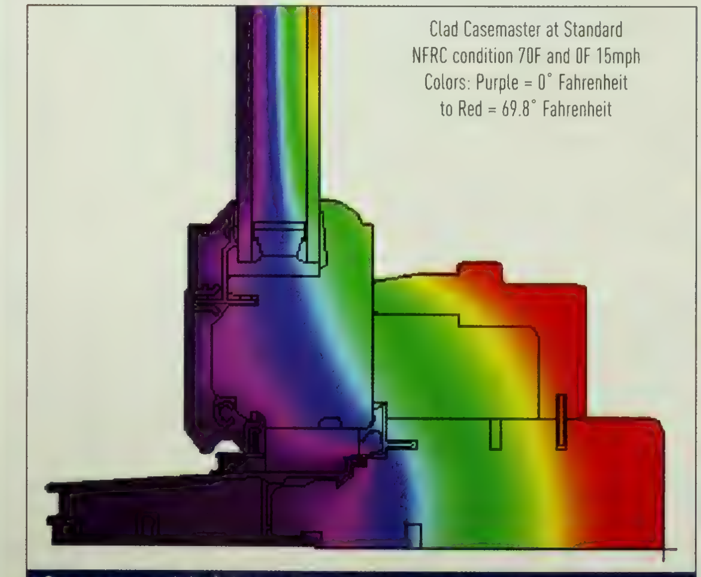


Photo credit: William Maclay

LEED Gold Certified Wind NRG Partners Manufacturing Facility, Hinesburg, VT designed by William Maclay Architects and Planners.

Green Building clearly involves attention to all aspects of a project. In an ideal world, delivering energy efficiency and sustainability begins before site selection. Over a year was spent searching for the NRG site. The building is elongated on the east-west axis to maximize solar gain in winter and to capture daylight all year. Most of the 2,100 sq ft glazing is on the south facade, while the north side is bermed into the hillside.

While an urban site necessarily limits building placement options, it is still possible to take advantage of orientation and deal with traditionally dark airshafts in an innovative manner. To reflect light into the building from the airshaft, the south facade of St. Francis College Academic Center and Library, St. Francis College, Brooklyn, NY, designed by Levi, while a Principal with Helpern Architects, was covered in reflective, corrugated aluminum panels. The north facade has a smaller glass area than the southern walls to strike a balance between daylight and energy conservation.


Clad Casemaster at Standard
NFRC condition 70F and 0F 15mph
Colors: Purple = 0° Fahrenheit
to Red = 69.8° Fahrenheit

Computer model of thermal transfer through a window cross-section. The colors represent temperature gradient. Courtesy of Marvin Windows and Doors

Architectural elements also make significant contributions to Green Building. For the Fay School, Southborough, MA, the oldest junior boarding school in the country, The Office of Michael Rosenfeld, Inc. Architects, included screening on the southern exterior wall to limit summer heat entering the building and, on the interior, a light shelf to reflect the summer heat.

Window Features and Criteria

Energy efficiency is clearly the dominant feature in specifying windows and doors for Green Building. But other factors such as use of recycled materials, recycling of waste and source of raw materials, count and are included where relevant, in the descriptions of window components below.

Architects specifying windows and doors will find no lack of information on energy efficiency, performance and durability. New advanced technologies and designs for glass coatings, gas fills, warm edge spacers and improved framing have all contributed to efficiencies. Manufacturers, government agencies and industry associations analyze components, make comparisons and develop ratings. Some features are certified by independent bodies. Others follow voluntary criteria developed by manufacturers' associations.

The National Fenestration Rating Council (NFRC) uses three criteria associated with energy as a guide to understanding how a window or door will perform: **U-Factor, Solar Heat Gain Coefficient** and **Visible Transmittance.** The building industry also measures the **Fading Transmission, R-Value** and **Condensation Resistance** to help evaluate a window's performance. All of these numbers have different significance and desired values depending on the region of the country (see www.nfrc.org).

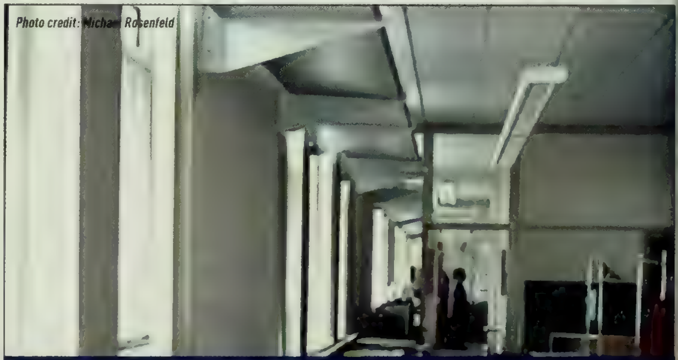


Photo credit: Michael Rosenfeld

A light shelf on the interior controls glare and heat. Fay School, Southborough, MA, designed by The Office of Michael Rosenfeld, Inc., Architects

Fay School, Southborough, MA, with sunscreens designed by The Office of Michael Rosenfeld, Inc., Architects

rwin Child and Family Center, Corning, NY, designed by D. W. Arthur Associate Architects. Wood aluminum-clad insulating glass, argon-filled doors and windows have low-E coating. Courtesy of Marvin Windows and Doors

he **U-Factor** = BTU/hr x sq ft x °F measures the *rate* of heat loss through the window. e *lower* the U-Factor, the better the window is at keeping heat from escaping. The R-Value easures a window's *resistance* to the passage of heat. The *higher* the **R-Value**, the better e insulating value of the window. Both the U-Factor and the R-Value are a measure of the nount of thermal transfer for any given window. Since the R-Value is the inverse of the U-ctor, both numbers can be calculated if one of the numbers is known. For northern imates, the Efficient Windows Collaborative (EWC) (www.**efficientwindows**.org) ggests the use of windows with a U-Factor below .40, while in the southern part of the ited States, a U-Factor of less than .65 is desirable.

oduct U-Factor and R-Values are determined by computer simulation using LBL THERM d Window software applications. LBL is part of the Lawrence Berkley National boratories (LBNL), a national lab funded in a large part by the U.S. Department of Energy.

he **Solar Heat Gain Coefficient (SHGC)** is the fraction of available solar heat that ccessfully passes through a window or door. SHGC replaced shading coefficient (SC) as a ore accurate way to calculate solar-heat gain. SHGC uses a scale of 0 for none, to 1.00 for 10 percent of available heat.

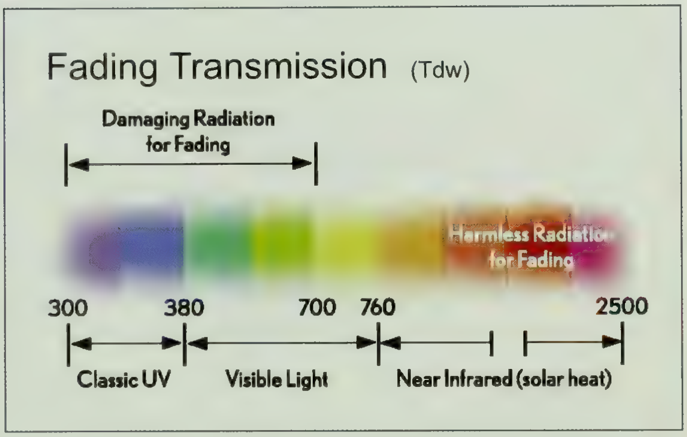
e *lower* the SHGC, the better the window's ability to block heat from the sun. Therefore, climates where the heat of the sun needs to be kept out of a building, a low SHGC is ecified, while in cold climates where most of the year is spent trying to bring the heat to a building, a high SHGC is specified. The EWC recommends that windows in Southern nes of the United States have a SHGC factor of 0.40 or less. Different types of tints and atings can drastically help to lower the SHGC and block unwanted heat gain.

isible Transmittance (VT) measures how much visible light comes through a window d into a building by comparing the visible light that would pass through an open hole in e wall the same size as the window or door. A VT value of 60 percent or more appears clear most people while a VT value below 50 percent begins to look dark and/or reflective. Although the frame does not transmit visible light, it is included in calculating the overall VT measurement or rating. VT measurements vary between 0 and 1, with most values between .30 and .80.

The *higher* the VT, the more light is transmitted. Coatings and tints that block the Solar Heat Gain Coefficient will reduce the amount of visible light that passes through a window. It is therefore important to take VT into consideration when choosing a type of glass.

A *low* VT can lead to an increase in the amount of artificial light needed in a building, therefore increasing energy costs. Visible Transmittance is becoming an important number given the proven benefits of natural light for people, especially those seeking to reduce cases of Seasonal Affective Disorder Syndrome, a depression caused in the winter months when natural light is available for a short number of hours each day.

*__Fading transmission__ relates to the interior furnishings of a building that can fade over time when certain parts of the solar spectrum enter a room. These include energy in the spectral region of 300 to 700 nanometers, or all of the ultra violet energy and most of the visible spectrum. Damage Weighted Transmittance, or Fading Transmission (Tdw), measures the amount of fading-causing solar energy that enters through a window. The *lower* the Tdw value, the better the glass protects against fading.


Fading Transmission (Tdw)
Damaging Radiation for Fading
Harmless Radiation for Fading
300
380
700
760
2500
Classic UV
Visible Light
Near Infrared (solar heat)

*__Condensation Resistance__ (CR) measures how well a product resists the formation of condensation, which can be caused by a number of factors such as the humidity in the room or by the difference in temperatures between the interior and the exterior. CR is expressed as a number between 1 and 100 although most are limited to ratings of no higher than 70. The higher the number, the better a product is able to resist condensation. CR is an optional rating and manufacturers can choose not to include it on their labels.

Glazing Technology Makes a Difference

Since the first century AD, when glass was originally made by casting, or blowing hollow cylinders that were slit and flattened into sheets, craftsmen have sought improvements. Having mastered the primary purpose of letting light in, manufacturers now address the many ways of treating glass panels to control the transfer of heat. Commercial glass is made with sand, a raw material in ample supply (the cost to recycle glass is a fraction of the original manufacturing cost). Glass is affected by few chemicals, resists most industrial and food acids, withstands intense heat or cold as well as sudden temperature change and retains heat, rather than conducts it. It also absorbs heat better than metal and strongly resists electric current, while its optical properties include reflecting, bending and absorbing light with great accuracy.

***Clear single pane windows** offer the lowest energy efficiency ratings and allow the highest transfer of energy and daylight transmission. Single strength glass is 3/32 inch (2.5 mm) thick.

***Insulating glass** offers the next lowest in terms of energy transfer. It features two panes of glass separated by a spacer around the entire perimeter and hermetically sealed together with dead air space between the panes. The spacer contains a moisture-absorbent material called desiccant that serves to keep the enclosed air free of visible condensing material. The dead air space creates an insulating barrier and also helps to reduce sound transmission.

Glazing

Single (clear glass)
- U-Factor—1.11
- SHGC—.86
- VT—.90

Double (clear glass)
- U-Factor—.49
- SHGC—.76
- VT—.81

Triple Low-E
- U-Factor—.13
- SHGC—.33
- VT—.56

Glazing values for different windows. These are average measurements that do not take into account tints and coating.

Double strength glass comes in 1/8 inch (3.0 mm), 5/32 inch (4.0 mm) 3/16 inch (5.0 mm) and 1/4 inch (6.0 mm) thicknesses. Structural requirements determine which glass strength is used in a project.

***Warm-edge spacers.** The thermally weakest part of any insulating glass system is the edge where the spacer separates the lites of glass. Aluminum spacers are being replaced by warm-edge spacers manufactured from low-conductivity material such as stainless steel, vinyl, butyl-rubber or silicone-foam. They can improve the U-Factor of a window by 10 percent and boost the glass edge temperature by nearly 5°F, thereby helping to reduce condensation.

***Low-Emissivity (low-E) coated** glass improves the U-Factor that in turn suppresses heat flow (reflects long wave radiation). It also blocks short wave radiation in order to impede solar heat gain—plus reducing winter condensation because of higher indoor glass temperatures. Low-E coatings are designed to reduce winter heat loss and summer heat gain as well as block harmful ultraviolet rays. They are available in high, medium or low solar gain. High solar gain is best suited for cold climates that need to bring in as much solar heat as possible, while low solar gain is appropriate for warmer climates. Low-E coatings also improve protection of furniture, carpet, and interior finishes from premature fading by lowering the Fading Transmission (Twd).

The low-E coating works by reflecting selected portions of the light spectrum out or in through the window. It is applied to one of the inside surfaces of the insulating glass and can block unwanted solar heat gain without blocking as much visible transmittance as tints do.

Evolved from the space program, the coating is a thin microscopic, virtually invisible (today's generation) metal or metallic oxide layer coating typically applied on the surface of the insulating glass. ■

Glass Performance

INSULATING GLASS

Product	Glass (MM)	Thickness (inches)	Air Space	Visible Light Transmittance %	Visible Light Reflectance Out%/In	U-Factor Winter BTU/HR Sq Ft °F	R-Value Winter	Shading Coefficient	Solar Heat Gain Coefficient	UV Blockage %
Clear Glass	3.0 3.0 3.0 5.0 6.0	1/8 1/8 1/8 3/16 1/4	1/4 1/4 1/2 5/8 1/2	[illegible] [illegible] [illegible] 80 79	16/16 16/16 16/16 15/15 15/15	0.57 0.57 0.49 0.48 0.48	1.75 1.96 2.04 2.10 2.10	0.87 0.87 [illegible] 0.83 0.81	0.75 0.75 .7 0.71 0.70	33 33 3 [illegible] 37
Laminated	6.0	7/32	1/2	79	14/14	0.49	2.04	0.79	0.69	99.9
Low E II	3.0	1/8	1/2	[illegible]	11/12	0.30	3.33	0.41	0.47	84
Low E II w/Argon	3.0 3.0 5.0	1/8 1/8 3/16	1/4 1/2 5/8	72 72 71	11/12 11/12 11/11	0.32 0.25 0.25	3.13 4.00 4.00	0.48 0.47 0.46	0.41 0.41 0.40	84 84 85
Bronze Tint/Clear	5.0 5.0 [illegible]	3/16 1/4 3/16	3/8 1/2 1/2	53 46 [illegible]	10/14 9/14 10/14	0.51 0.48 0.48	1.96 2.10 2.10	0.62 0.56 0.62	0.53 0.49 0.53	[illegible] 72 66
Gray Tint/Clear	5.0 5.0 6.0	3/16 3/16 1/4	3/8 [illegible] 1/2	45 45 40	9/14 9/14 9/14	0.51 0.48 0.49	1.96 2.10 2.04	0.61 0.61 0.51	0.52 0.52 0.44	[illegible] [illegible] [illegible]
Cool Bronze Clear	5.0 5.0 6.0	3/16 3/16 1/4	3/8 5/8 1/2	20 [illegible] 19	37/20 37/20 37/20	0.51 0.48 0.48	1.96 2.10 2.10	0.36 0.36 0.34	0.31 0.31 0.29	90 90 91
Bronze Tint/ Low E II w/Argon	[illegible]	3/16	5/8	48	8/10	0.25	4.00	0.40	0.34	92
Low E II Tri-Pane w/Argon	[illegible]	3/16	3/8	56	13/13	0.14	7.14	0.39	0.34	[illegible]

A Role Model for Green

The Trapps Gateway Center for the Mohonk Preserve, Gardiner, NY, designed by Lee H. Skolnick Architecture + Design Partnership, is an exemplary role model for building Green. Serving as an educational tool and expression of the Preserve's mission of land stewardship and education, the 9,200 sq ft building is the visitor center for the Preserve's 6,000 acres. Trees were cut from the site to become structural posts, walls are built from native conglomerate stone, the lower level is set into the hillside and a geothermal heat pump system serves as sole source of heating and cooling.

Appropriate windows were therefore critical for both energy efficiency and withstanding 80 mph winds, Wood windows clad in evergreen-colored extruded aluminum have argon-filled low-E insulating glass. The interior wood was left unpainted to keep the building's look congruent with its natural surroundings. A full-height glass wall which presents a view of the bird habitat was reinforced by adding horizontal and vertical tube steel members (3 inch x 4 inch x 5/16 inch) that could withstand both the window load and 1,000 lbs of end load from the weight and projection of the windows over the mountainside. Since LEED credits can be earned by using regionally produced building products (within 500 miles of the project site) some architects weigh the option of having windows manufactured locally. But more important, says Paul S. Alter, AIA, who was managing partner for the project, is selecting a window manufacturer who delivers a good product with fine detailing, different options, meets budgetary considerations and who will support you in providing what you need.

CLICK FOR ADDITIONAL REQUIRED READING

he article continues online at ***http://www.archrecord.com/resources/conteduc/archives/0606marvin-1.asp*** To receive AIA/CES credit, you are required to read this additional text. The quiz questions elow include information from this online reading. To receive a faxed or emailed copy of the material, contact Marvin by e-mail at aia-ces@marvin.com or call (800) 236-9690 or go to www.marvin.com.

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Be familiar with how windows and doors play a role in Green Building.*
- *Understand how the features of windows and doors impact energy efficiency.*
- *Have knowledge of standards and criteria that apply to specifying Green windows and doors for Green Buildings.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 364. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. Green Building today___
  a. Is still a fad with few projects to show for it.
  b. Only applies to solar energy.
  c. Involves all aspects of a project's impact.
  d. Only occurs in the natural environment.

2. Life cycle analysis
  a. Attempts to quantify the impact of a product or building over its life cycle.
  b. Is not possible yet because of a lack of software tools.
  c. Is not possible yet because of a lack of data.
  d. a. and c. above

3. Designing energy efficient windows in the northern U.S. includes___
  a. Focusing exclusively on window criteria.
  b. Focusing exclusively on building orientation.
  c. Placing most glazing on the southern facade.
  d. Placing most glazing on the northern facade

4. The National Fenestration Rating Council (NFRC) uses the following criteria as a guide to window performance.
  a. R-Value and, Solar Heat Gain Coefficient
  b. U-Factor, Solar Heat Gain Coefficient and Visible Transmittance
  c. U-Factor, Condensation and R-Value
  d. Solar Heat Gain Coefficient and Visible Transmittance

5. A window is better able to block heat if it has a___
  a. Higher U-Factor.
  b. Lower R-Value.
  c. Higher SHGC.
  d. Lower SHGC.

6. Most Visible Transmittance (VT) values lie between___
  a .30 and .80.
  b. 1.2 and 1.5.
  c. .20 and .60.
  d. 1.0 and 2.0.

7. The weakest (in energy performance) part of any insulating glass is___
  a. The glass itself.
  b. The edge where the spacer separates the lites of glass.
  c. The seals.
  d. The glass after it has been tinted.

8. Low-E coatings___
  a. Block ultraviolet rays
  b. Lower Fading Transmission
  c. Reflect long-wave radiation and block short wave radiation
  d. a. b. and c.

9. The highest AAMA industry standard for window paint finish is___
  a. 605.2-92
  b. 2603-02
  c. 2604-02
  d. 2605-02

10. The American Architectural Manufacturers Association (AAMA) administers specifications for___
  a. Finishes on window frames, sash and cladding.
  b. Low-E coating performance.
  c. Condensation values.
  d. Fading Transmission values.

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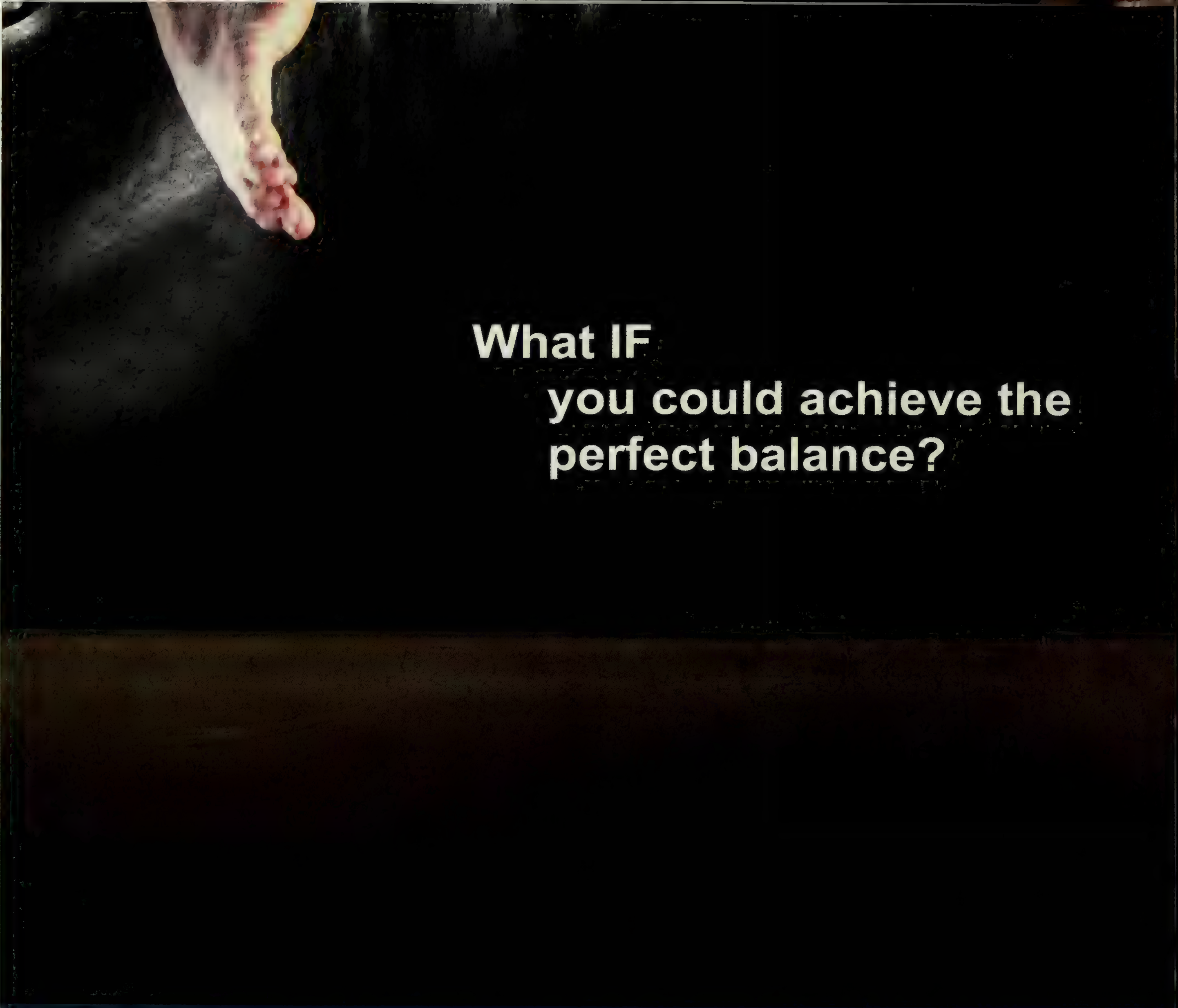

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Interiors

A hotel lobby morphs into a gallery, while a pathway to a skyscraper's pinnacle is part of the show

BRIEFS

Honored in May with the James Beard Foundation Award as best new restaurant in the U.S., The Modern in New York City also won the top prize for best restaurant design. Bentel & Bentel Architects/Planners designed the restaurant at the Museum of Modern Art [RECORD, September 2005, page 124]. Other restaurant design finalists were Il Fornello Church Street in Toronto, by Giannone Associates, and Haku (which closed in summer 2005), designed by Evan Douglis Studio. Established in 1990 to honor legendary food writer James Beard, the awards recognize excellence in the categories of books, restaurants, chefs, broadcasting and print journalism, restaurant design, and industry achievement. For more information on the 70 winners, go to www.jamesbeard.org.

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The title of the inaugural exhibition on view through September at the new 21C Museum Hotel in Louisville, Kentucky, is *Hybridity: the Evolution of Species and Spaces in 21st-Century Art.* Awaiting guests in a gallery visible from the registration desk, the show includes challenging—and often surreal—sculptures, paintings, and photography by leading contemporary artists including Grant Hayunga, Nicolas Lampert, and Patricia Piccinini. The notion of hybrid is a fitting metaphor for the property, which combines a nonprofit museum and a 91-room hotel within the walls of five renovated 19th-century warehouses. Designed by Deborah Berke & Partners, the 21C does not employ art as a decorative backdrop. Rather, hotel guests and museum patrons are welcomed into an environment that makes encounters with colorful collages and paintings seem inevitable. From a 6,000-square-foot atrium gallery to artful chandeliers and display vitrines gracing each elevator lobby (right), the entire hotel presents a primer on how art is evolving in the 21st century.

Top of the Rock in New York City presents a different kind of insightful journey. Renovating underused spaces at the base and top of the landmark 30 Rockefeller Center, Gabellini Sheppard Associates has created a procession of lobbies and galleries that are a dramatic prelude to viewing Manhattan from observation decks perched 70 floors up. While respecting the building's original Art Deco details, the architects introduced Modern edges and luxe materials (crystal, terrazzo, and art glass) to reinforce a sense of spectacle. Along the way, visitors are treated to a multimedia overview of the urban center's history.

In Seattle, the restaurant Veil is a notable adaptive reuse that plays with the expectations of arriving patrons. Renovating a ground-floor space in a 1930s building that once housed a grocery store, Arai Jackson Ellison Murakami introduced precise geometry and an air of mystery within a monochromatic backdrop for progressive American cuisine. Illuminated fabric scrims and translucent glass walls create a gossamer interior landscape just beyond the rough brick facade. *William Weathersby, Jr.*

Gabellini Sheppard Associates creates an elegant route ascending to the **Top of the Rock**

By Leanne French

When it debuted in the midst of the Great Depression, the observation deck of 30 Rockefeller Center in New York City was a symbol of modern American progress, the pinnacle of developer John D. Rockefeller Jr.'s inspired urban complex that wed art, architecture, and commerce. Evoking an Art Deco luxury liner, the observatory was outfitted with lawn chairs, umbrellas, and gooseneck fixtures to welcome fashionable visitors who gathered to admire each other and the cityscape below. The original grandeur was sadly lost when the viewing platforms were closed in 1986 for the renovation of the Rainbow Room. Now, after a $75 million renovation and expansion by architect Gabellini Sheppard Associates, the renamed Top of the Rock is a reinvented destination for a new generation of visitors.

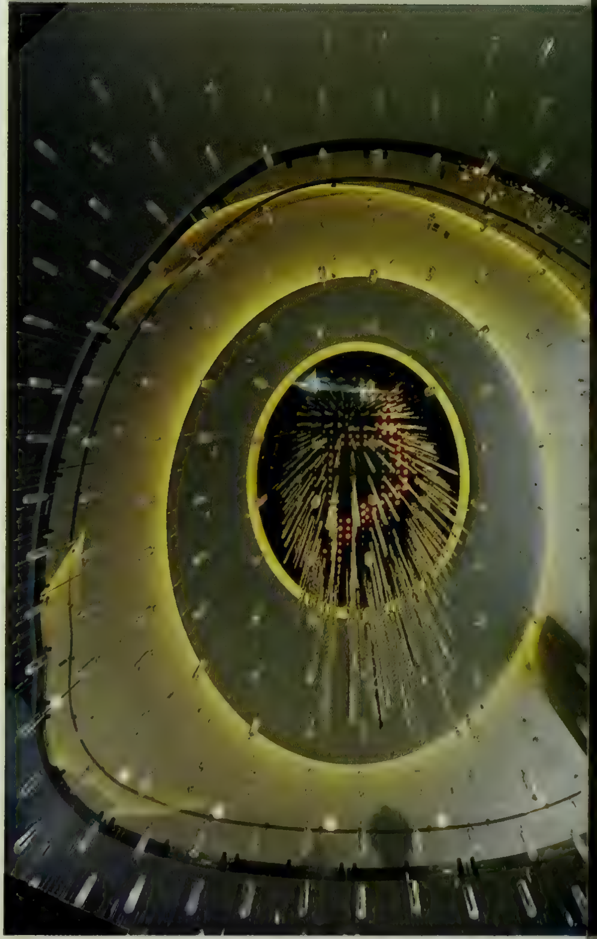
Commissioned by Rockefeller Center co-owners Tishman Speyer Properties, the project went beyond renovating the existing viewing decks to create new entry and exhibition spaces within a three-level area at the base of the building, replacing streetfront retail tenants. The challenges were to carve a memorable experience out of an unwieldy space and to visually connect the entry with the spectacular outlook perched 70 floors above. The architects orchestrated a sense of procession in keeping with the original stateliness of the building's architecture (designed by a team helmed by Raymond Hood). "This project is about transporting more than two million people a year—physically to the top of the tower and imaginatively through visual imagery," says principal architect Michael Gabellini.

The new entrance features a three-level atrium with a helical spiral stairway that introduces the idea of ascent. Suspended, overlapping plaster walls soar upward along the stair's profile and appear to float, backlit by recessed lighting. Terrazzo stair treads that progress in gradations from dark to light also subtly express the journey from the ground to the sky.

The centerpiece of the lobby is a cascading crystal chandelier, designed by the architects in collaboration with Swarovski, one of the project's corporate sponsors. The sculptural piece comprises 600 strands

Leanne French is a freelance writer based in New York City. She is a frequent contributor to the Interiors and Lighting sections of ARCHITECTURAL RECORD.

Project: *Top of the Rock, New York City*
Architect: *Gabellini Sheppard Associates—Michael Gabellini, FAIA, Kimberly Sheppard, AIA, Daniel Garbowit, AIA, partners; Blandine Seguin, project manager*
Architect of record: *SLCE Architects*
Engineers: *ADG (structural); Edwards and Zuck (m/e/p)*
Lighting designer: *William Armstrong Lighting Design*



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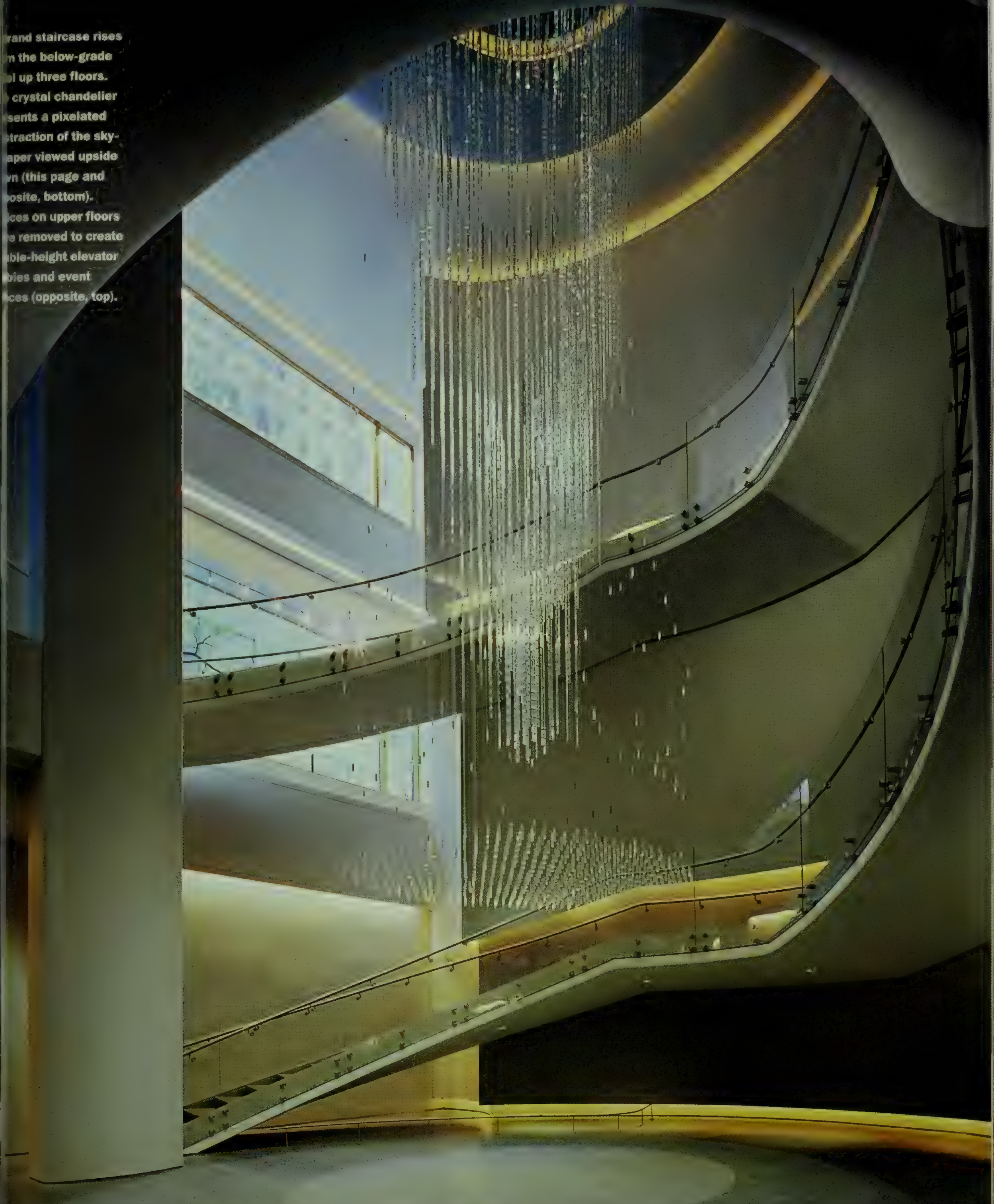

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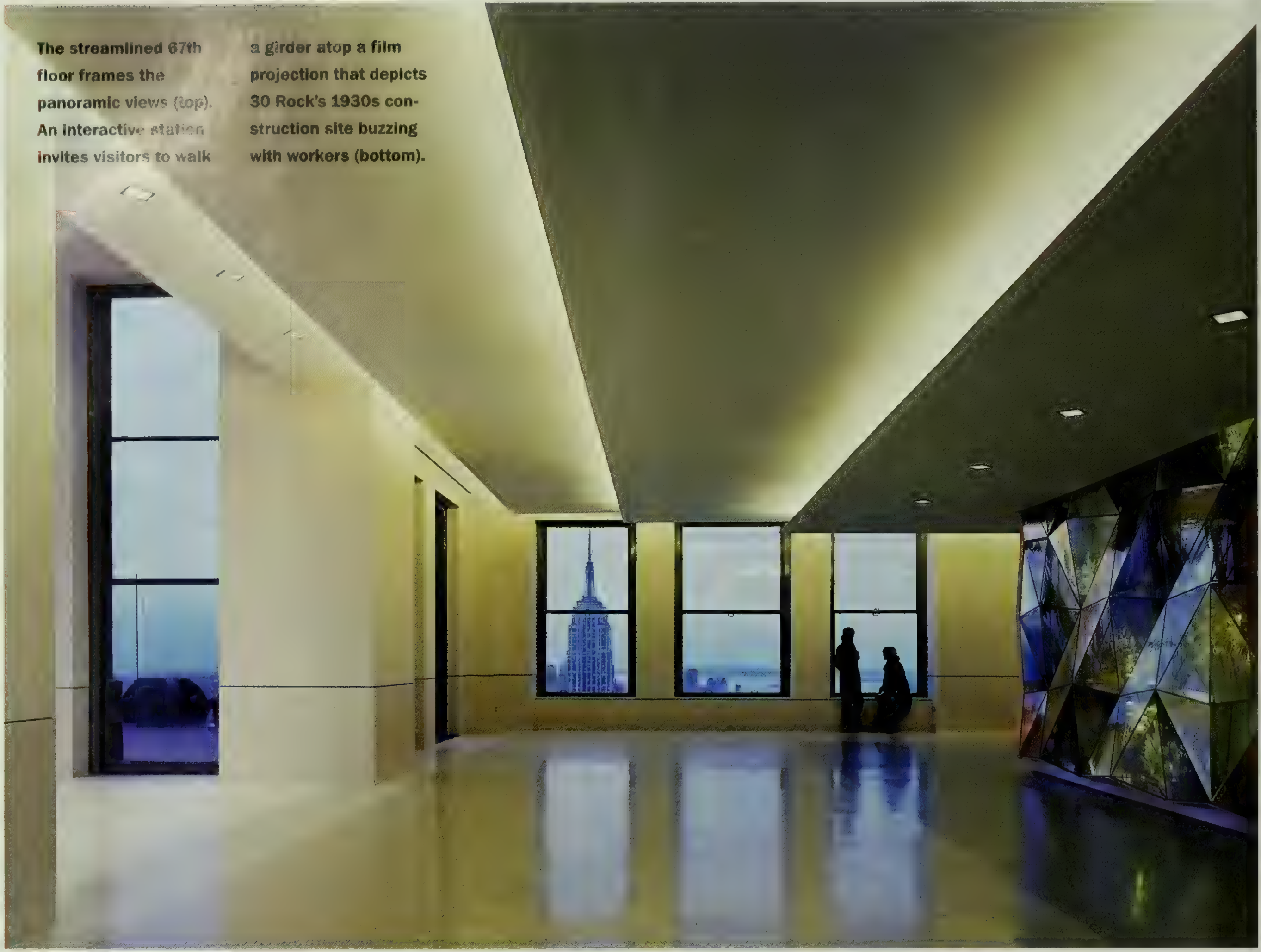


The streamlined 67th floor frames the panoramic views (top). An interactive station invites visitors to walk a girder atop a film projection that depicts 30 Rock's 1930s construction site buzzing with workers (bottom).

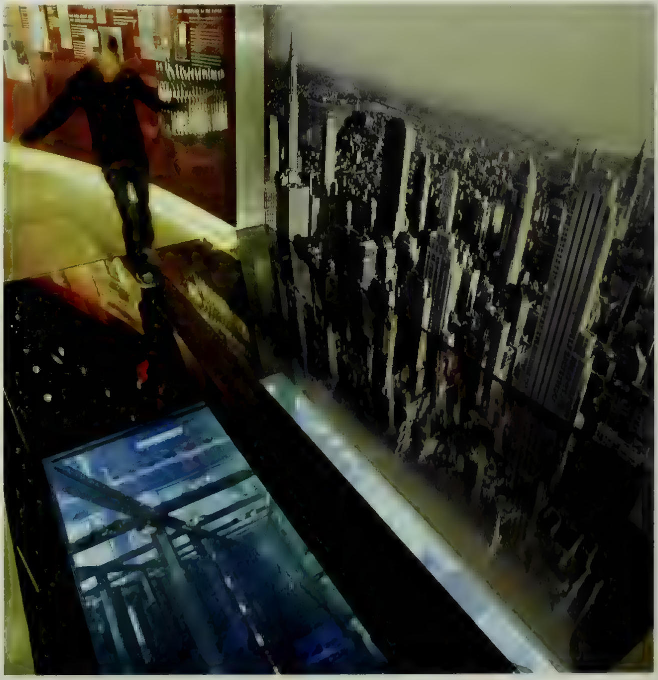
of 15,000 prismatic crystals, based on an Art Deco form created by Swarovski in the 1930s. Hanging 35 feet down from a mirrored ceiling disc and illuminated by fiber optics, the crystals form a pixelated abstraction of the skyscraper viewed upside down.

The staircase leads visitors to a mezzanine exhibition level. The elliptically shaped space, designed in collaboration with Bob Weis Design Island Associates, encourages visitors to stroll past graphic and text panels, archival images, and video screens that illustrate the history of Rockefeller Center. A cocoon-shaped theater is the last stop on the mezzanine before one takes a dramatic elevator ride up to the Top of the Rock.

Conceived as time capsules, black Corian-clad elevators transport visitors up to the 67th floor in 20 seconds, while zooming through seven decades of Rockefeller Center history. Overlapping historic images are projected on the elevators' acrylic ceilings, which also provide a view into the illuminated elevator shafts during the ride.

All is prelude to arrival on the upper-level observation decks on floors 67 through 70, where the interior architecture steps back and allows the panorama to take the lead. Rather than fencing or railings, the decks' safety enclosures are cantilevered, 8.5-foot-tall glass panels designed to be unobtrusive to the landmark Indiana limestone and cast-aluminum parapet. The double layers of laminated, UV-shielding glass serve as a wind barrier while offering virtually unhindered viewing.

On the 67th floor, the 7,700-square-foot Grand Viewing Room,



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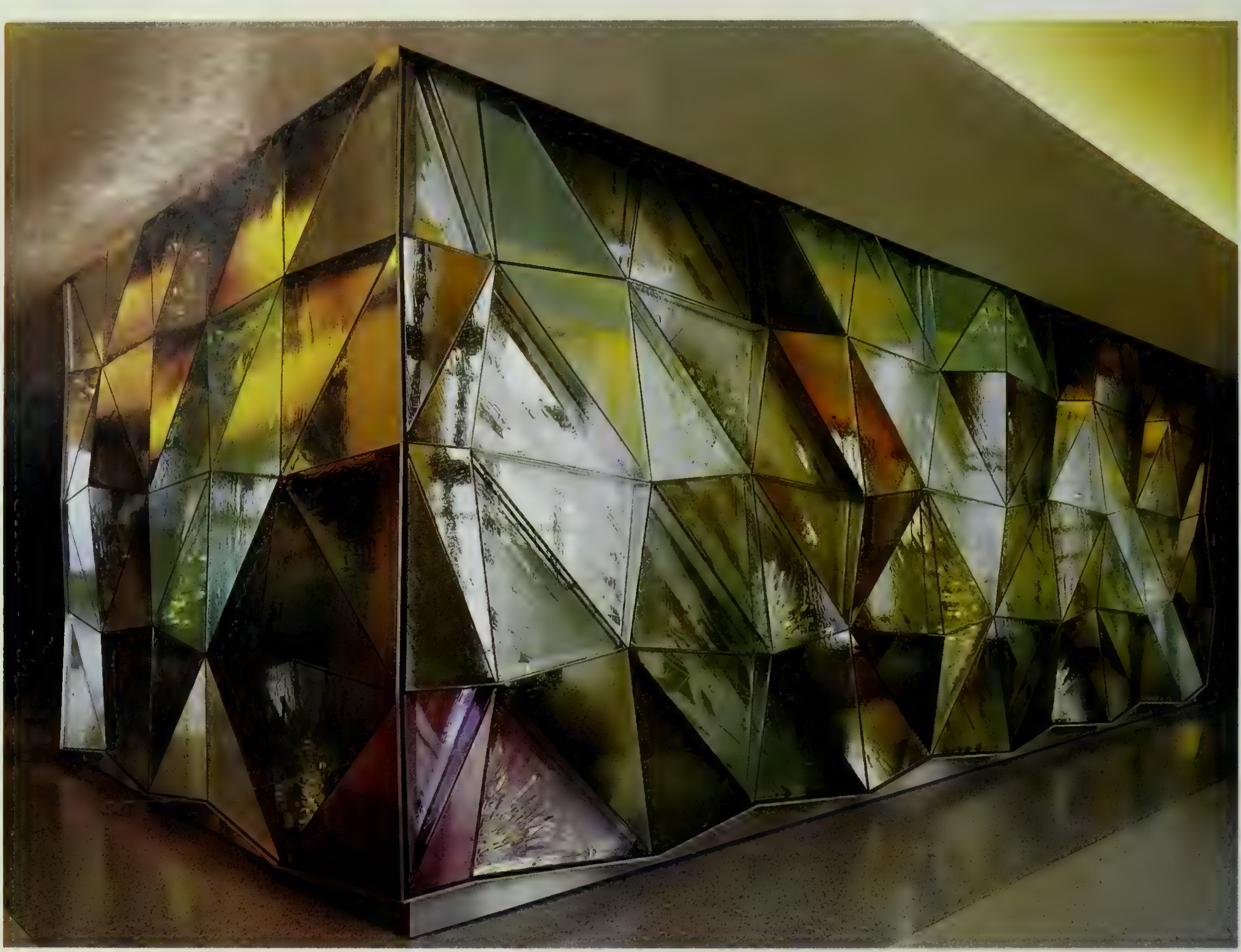

previously housing utility functions, was opened to the public as part of the Top of the Rock experience. Geodelike walls wrap the elevators and mechanical core, abstractly recalling the building's geological foundations. Composed of 600 triangular facets of crystals and etched art glass affixed to an optical mirror backing, the walls serve as a Cubist frieze whose surfaces reflect and refract changes in natural light.

At the east end of the 67th floor, a triple-height space dubbed the Weather Room is proportioned like a chapel and infused with natural light from 12-foot-high windows. One story above, the Skyroom evokes a choir loft and incorporates programmed LED illumination. Additional observation decks wrap the 69th floor, with a restored exterior stairway leading to a smaller perch one floor above.

The Top of the Rock once again offers a soaring urban experience. "By day, the view is quintessential Gotham," says Gabellini. "By night, it's celestial. You feel like you are at the center of the universe." ■

Geodelike walls mask the mechanical core and serve as a backdrop for event spaces (above). The southern view from the observation deck features the Empire State Building, unobstructed by the glass barrier (below).

Sources

Atrium stair structure: *Empire City Iron Works*

Architectural glass and metal: *Architectural Metal Group Design; Coordinated Metals*

Chandelier: *Nagel Hammers Studios*

Crystals: *Swarovski*

Interior stone: *Continental Cast Stone*

For more information on this project, go to Interiors at **www.archrecord.com**.

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Deborah Berke adapts historic warehouses to nurture a hybrid of art and commerce at **21C Museum Hotel**

By William Weathersby, Jr.

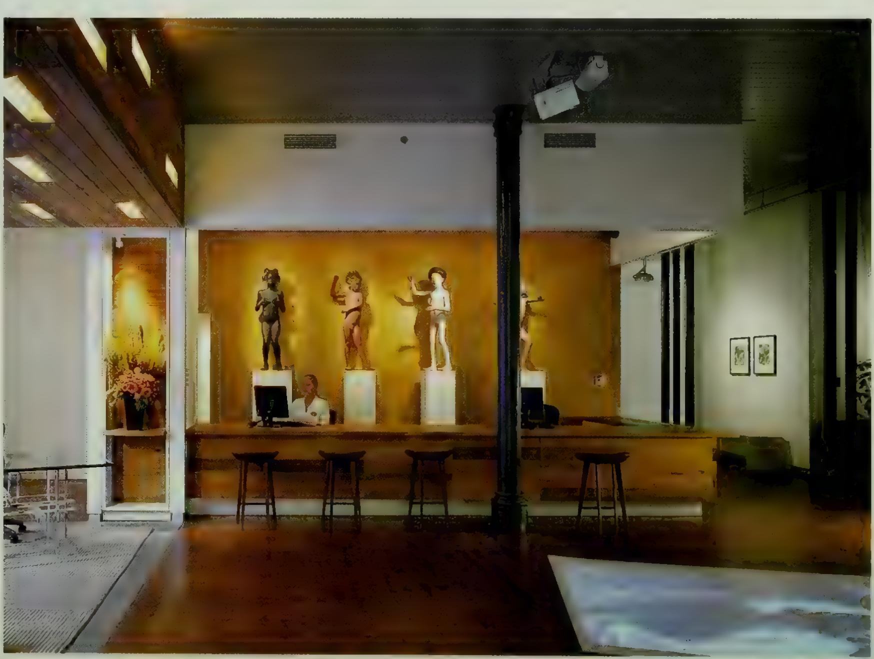
Boutique hotels filled with arresting artwork and furniture have been a mainstay since the early 1990s, but a new property in Louisville, Kentucky, reaches further in its embrace of world-class contemporary art. The 21C Museum Hotel, designed by architects Deborah Berke & Partners, is a hybrid building that blurs the distinction between gallerygoing and overnight lodging. Carved from historic tobacco and bourbon warehouses on West Main Street, the complex accommodates 91 guest rooms, a bar and restaurant, and more than 9,000 square feet of exhibition space. Creatively balancing art and commerce, the hotel is a community crossroads that breathes new life into a rebounding urban corridor.

The hotel is the brainchild of Louisville investors and art patrons Steve Wilson and Laura Lee Brown, who say they wanted to catalyze a renaissance of downtown while pursuing a passion for collecting new works by living artists including Chuck Close, Red Grooms, and Andres Serrano. (The couple is also behind a proposal to build a 60-story, mixed-use complex nearby designed by the Office of Metropolitan Architecture [RECORD, March 2006, page 34].) Amassing an art collection valued at more than $10 million while operating a bison farm outside the city, they decided to create a nonprofit museum and foundation after exploring other redevelopment options for the site, including high-end apartments. Because the combined free-admission museum and commercial hotel adapts five 19th-century brick-and-cast-iron warehouses on the National Register of Historic Places, the 21C (for 21st century) Museum Hotel qualified for city, state, and national tax credits.

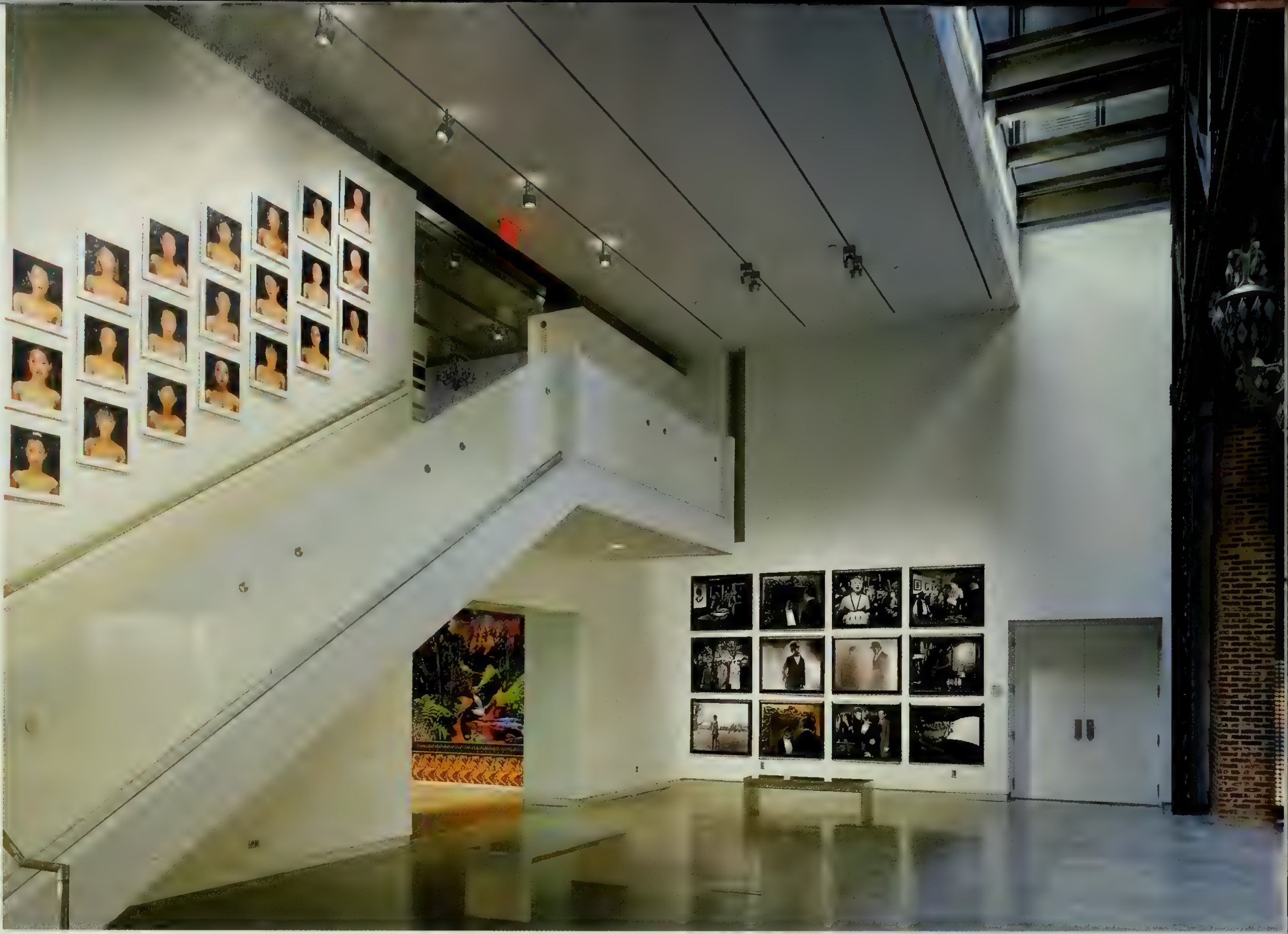
Although the disparate programs of a museum and hotel required some discrete, dedicated spaces, the challenge was to merge the functions into a unified whole, according to principal architect Deborah Berke. Integrating modern architectural spaces within the historic shell was also a balancing act. "We didn't want to lose touch with the character of the 19th-century buildings, but wanted the 'newness' of the contemporary architectural spaces to be completely clear to guests," she says. "The areas available for back-of-house functions for both museum and hotel were also tight."

Four of the narrow warehouses line up side by side, with a fifth situated at the south end of the site. Historic preservation guidelines required the architects to retain some original brick walls and timber trusses, and local codes mandated a window in each guest room. To solve the programmatic puzzle, Berke inserted two stacked volumes as an atrium within the center of the two easternmost warehouses. Excavated below grade, the lower volume is a double-height, 6,000-square-foot main

Project: *21C Museum Hotel, Louisville*
Architect: *Deborah Berke & Partners Architects—Deborah Berke, principal; Stephen Brockman, project architect; Terrence Schroeder*
Architect of record: *K. Norman Berry Associates Architects*
Engineers: *Stanley D. Lindsey and Associates (structural); Kerr-Greulich Engineers (mechanical/electrical)*
Contractor: *James N. Gray Company*



Four of the hotel's five restored 19th-century facades front Main Street (above). The guest-registration desk merges with art exhibition spaces (right). Accessed off the lobby, a cantilevered stairway enters the main gallery space (opposite). A new structural-steel truss bears the weight of historic brick walls that frame the glass-topped interior atrium.

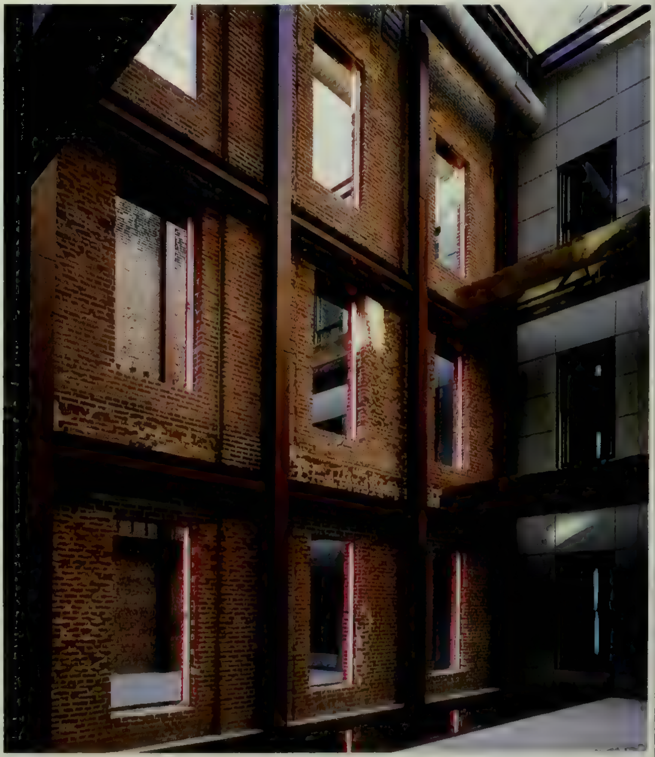


gallery that accommodates installations of large-scale art. The space is topped by a new, massive steel truss that distributes the weight of the load-bearing brick walls on upper floors. The lower level contains additional galleries, meeting rooms, a fitness center, and support areas. New concrete slabs tied into bearing walls form the upper guest-room floors.

Above the main gallery, a second enclosed volume creates a dramatic interior space visible from surrounding guest rooms, though it is not accessible to guests. A skylight at the top of this atrium allows light into the space and down through another layer of glass into the main gallery. Fluorescent lights outline new perforations in the original brick bearing walls that mimic windows. New steel trusses form a grid. The enclosure artfully overlaps a pentimento of the historic structure with a new surreal effect.

A steel-and-glass canopy inserted into the original cast-iron facade on Seventh Street marks the entry to the hotel. In the lobby, sculptures of children by artist Judy Fox serve as bold sentinels behind a low-slung check-in desk faced with reclaimed wood. Punctuated by cast-iron columns and end-grain flooring, an adjacent loftlike lobby gallery features selections from the foundation's collection and will host rotating exhibitions. Visitors descend to the main gallery via a stair to the west framed by a milk-glass railing. To the north, beyond a viewing room dedicated to video art, guests enter through glass doors into the restaurant, Proof on Main. Fronting West Main Street, the restaurant is divided into

The main gallery accommodates art in many media (above). Above the gallery, an enclosed volume framed by sections of the original buildings (right) can be viewed from guest rooms.



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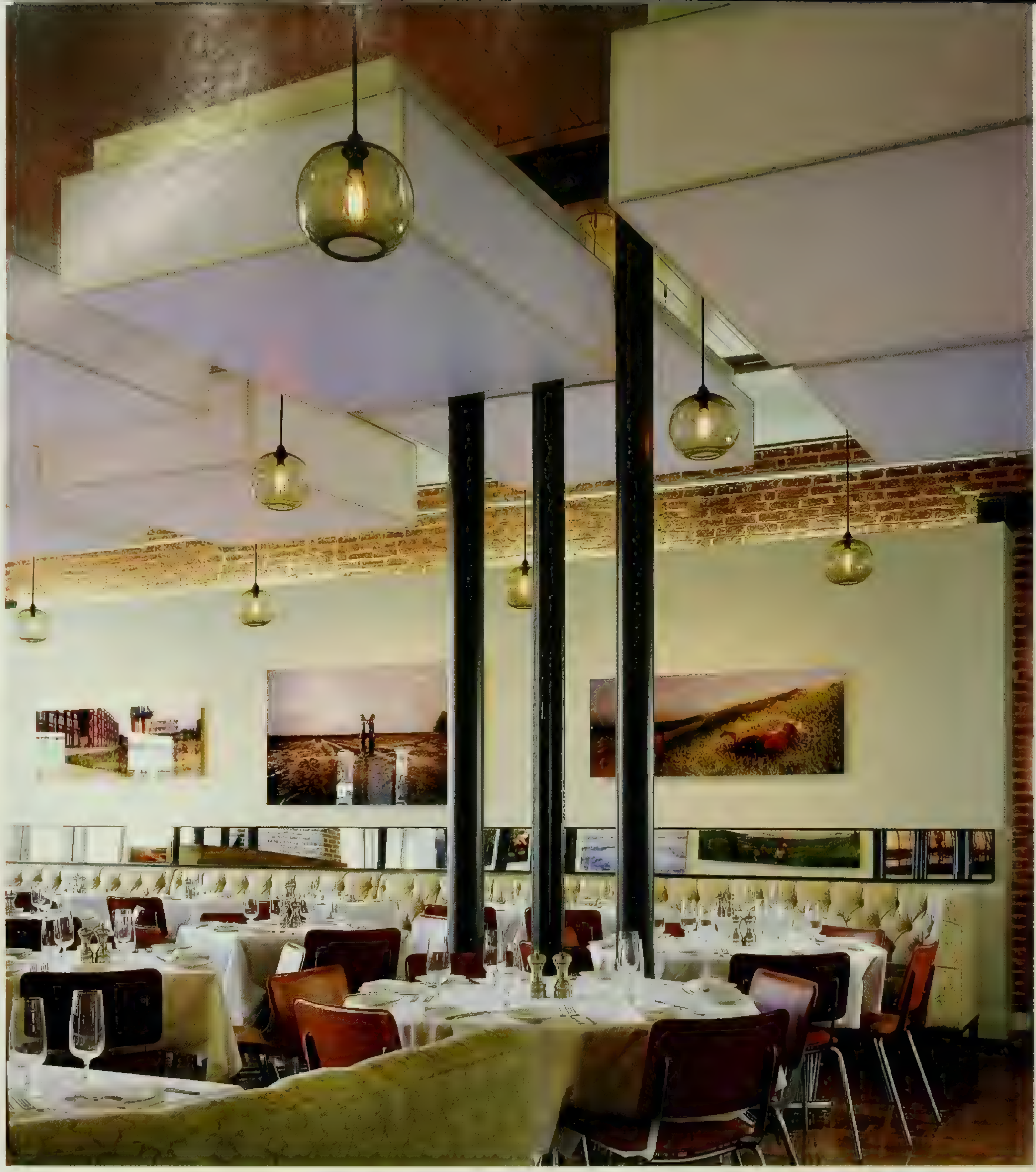

The restaurant, Proof on Main, is divided into a bar and two dining rooms with ample wall space for displaying art (left). Berke designed custom furniture for guest rooms (below), for a softer edge than the gallery spaces.

two dining areas and a bar that hew to the footprints of the original storefronts. Wall partitions provide more surfaces for showcasing art.

Artists designed chandeliers for elevator landings on each of the guest-room floors. Vitrines display art against fragments of the original brick walls. Guest rooms feature smaller framed works, while black headboards made of recycled bottles are backdrops for museum posters and prints. A calm color palette and streamlined furniture designed by Berke create an ambience quieter than that of the public spaces. "It's a visual rest from the provocative art downstairs," Berke says. You may not be sleeping in a gallery, but contemplation within a museum is only steps away. ■

Sources

Furniture: *Bassam Fellows; Design Within Reach; Janus et Cie; Herman Miller; Knoll Studio; Charter Furniture; Kimball Hospitality*

Blinds: *Hunter Douglas*

Rugs, carpets: *Tai Ping Carpet; Templeton Mills*

Wall covering: *MDC Wallcoverings*

Lighting: *Baldinger; Niche Modern*

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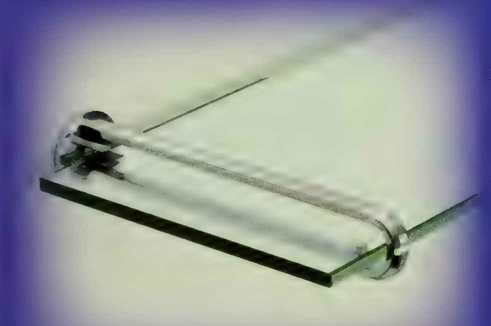

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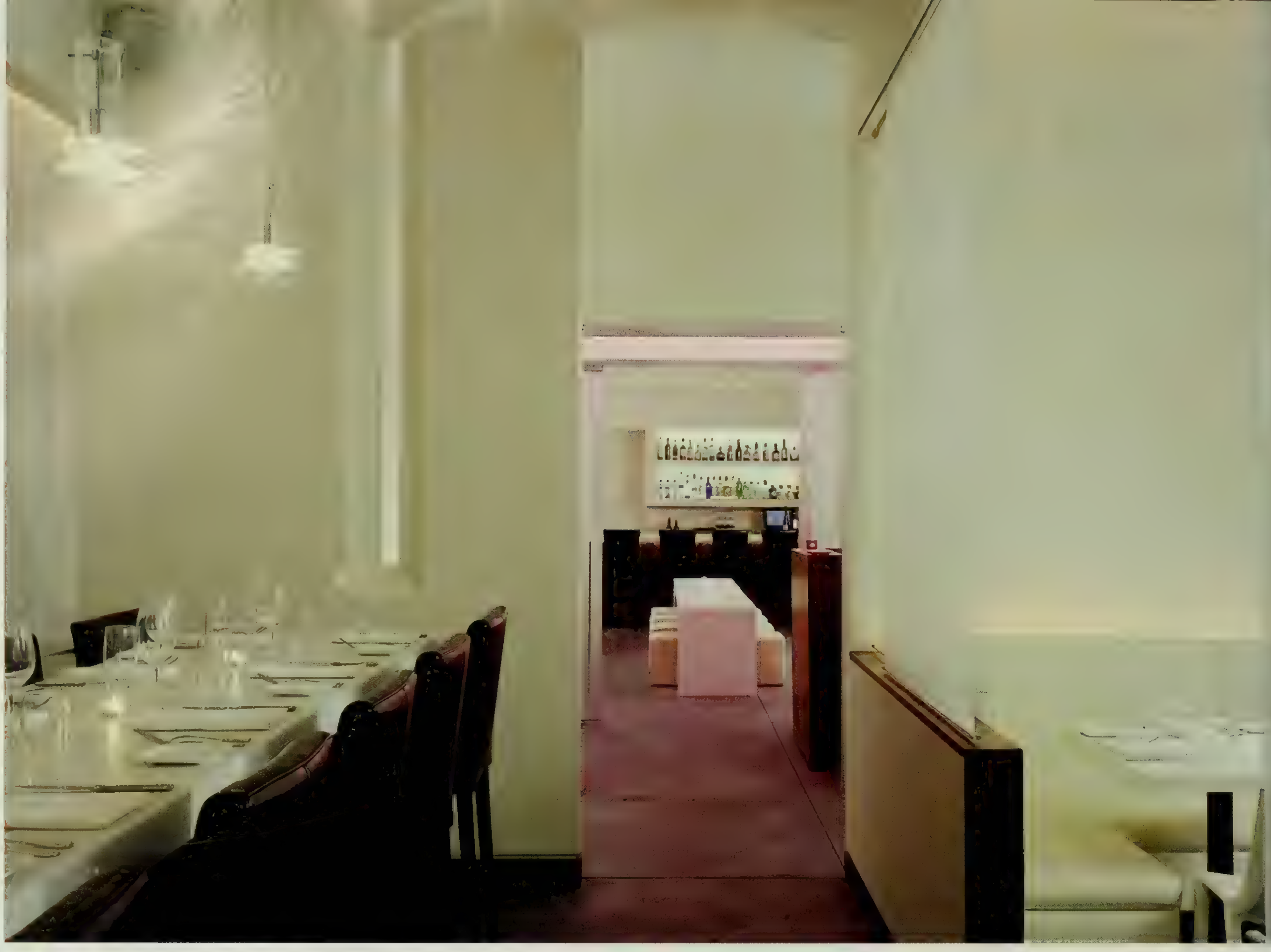


Arai Jackson Ellison Murakami conjures a gossamer lightness for the new **Veil** restaurant in Seattle

By John Peter Radulski

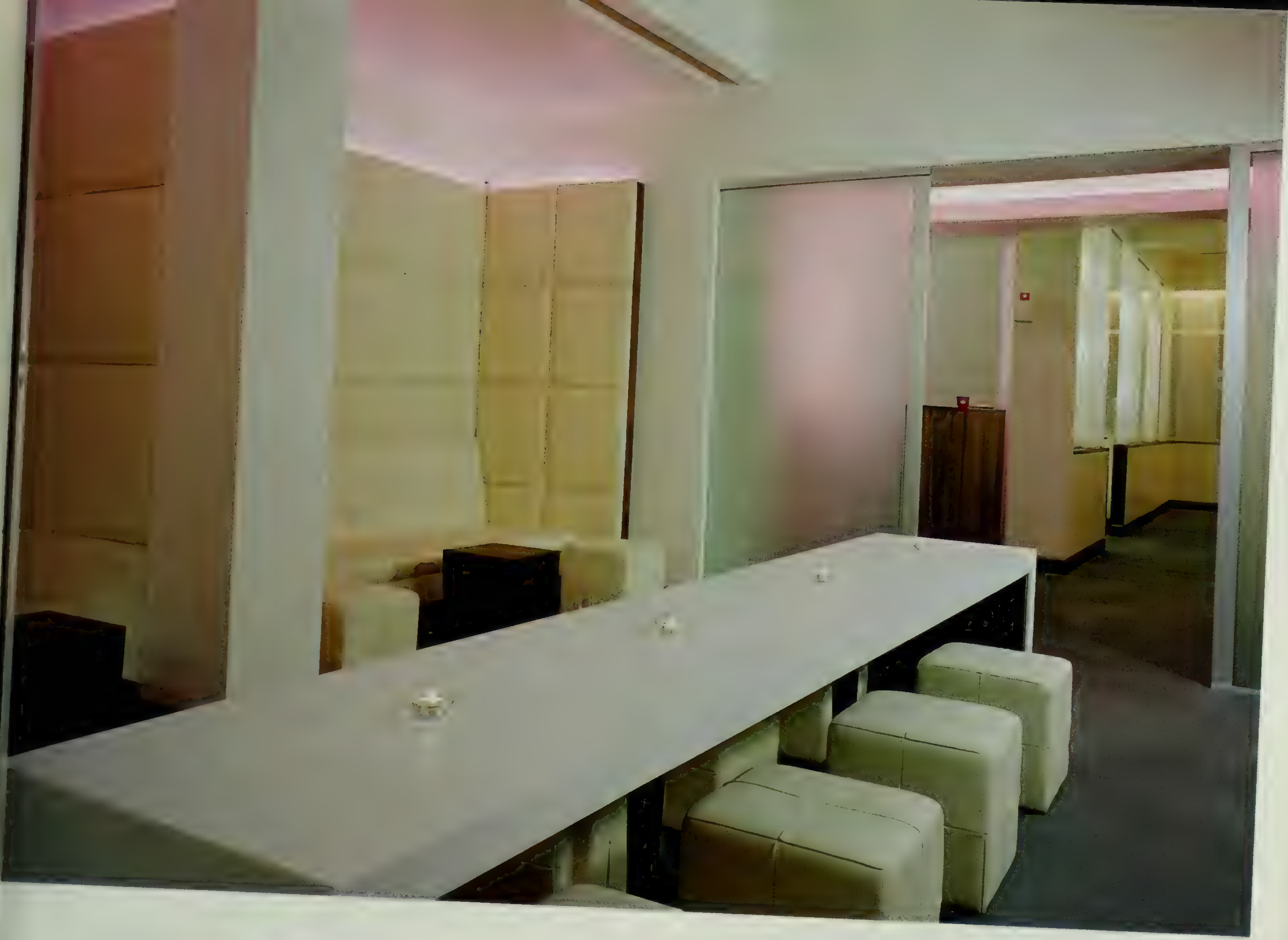
As its name implies, the restaurant Veil is an interior cloaked in mystery. Designed by architects Arai Jackson Ellison Murakami, the Seattle venue employs translucent glass planes, gossamer fabric sheers, and partially obscured sight lines to impart a sense of discovery as patrons navigate through the mostly monochromatic space. The Minimalist backdrop supports a menu of progressive American cuisine while introducing refined simplicity to this outpost in the up-and-coming neighborhood of lower Queen Anne.

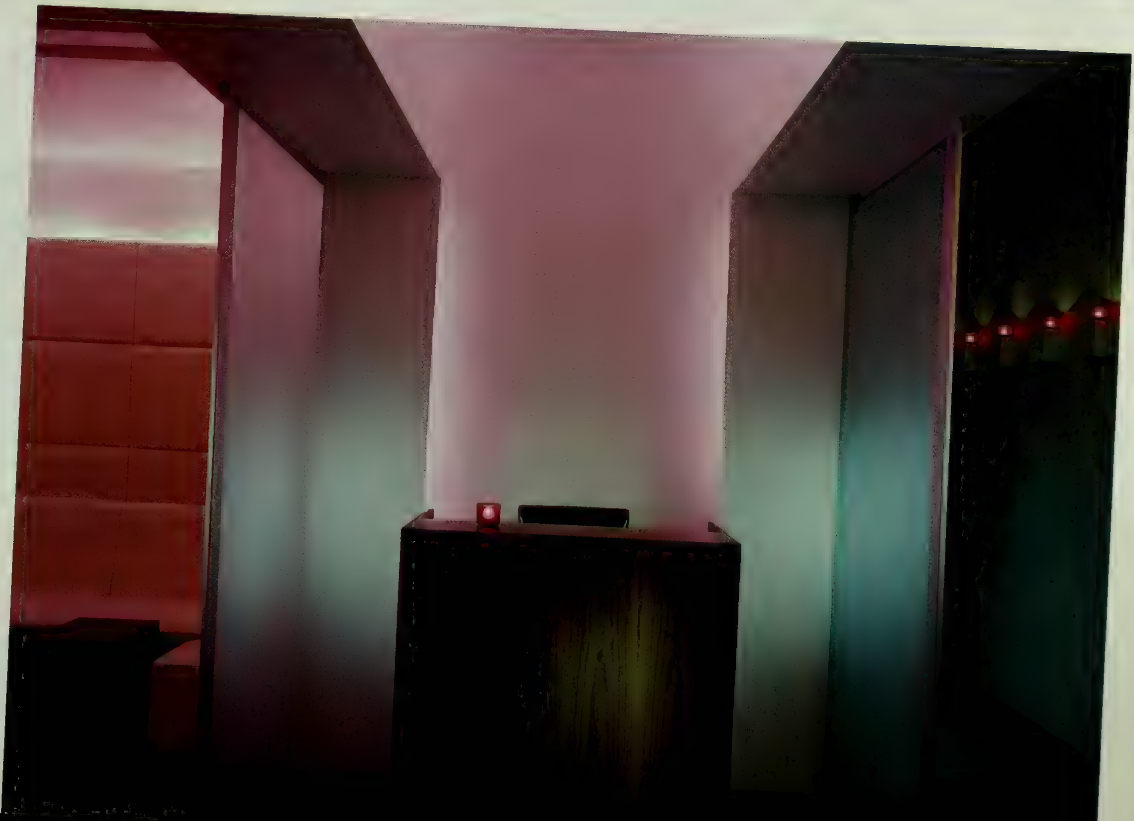
The restaurant represents a clean slate of sorts for both architect and clients, according to project principal Richard Murakami. Restaurant partners Erik Lindstrom and Shannon Galusha were childhood friends who decided to open an eatery after becoming reacquainted at a high school reunion. Lindstrom was a New York City advertising executive, and Galusha a chef who had established a following in Seattle but had not owned his own place. Arai Jackson, meanwhile, was making its hospitality design debut. Almost 90 percent of its projects derive from government contracts for airports and fire and police stations. At a time when the architects' office temporarily housed the local chapter of the AIA, the clients were intrigued by their portfolio and commissioned Veil.

Gutting the streetfront space, a former grocery in a dilapidated 1930s brick building, the architects annexed an adjacent apartment to create a total of 2,500 square feet for front- and back-of-house use. Within a tight budget of $150 per square foot (including furnishings and kitchen equipment), they installed new mechanical systems and replaced glazing along the north and west facades. A new floor of waxed and sealed concrete established an easy-to-maintain, spartan look.

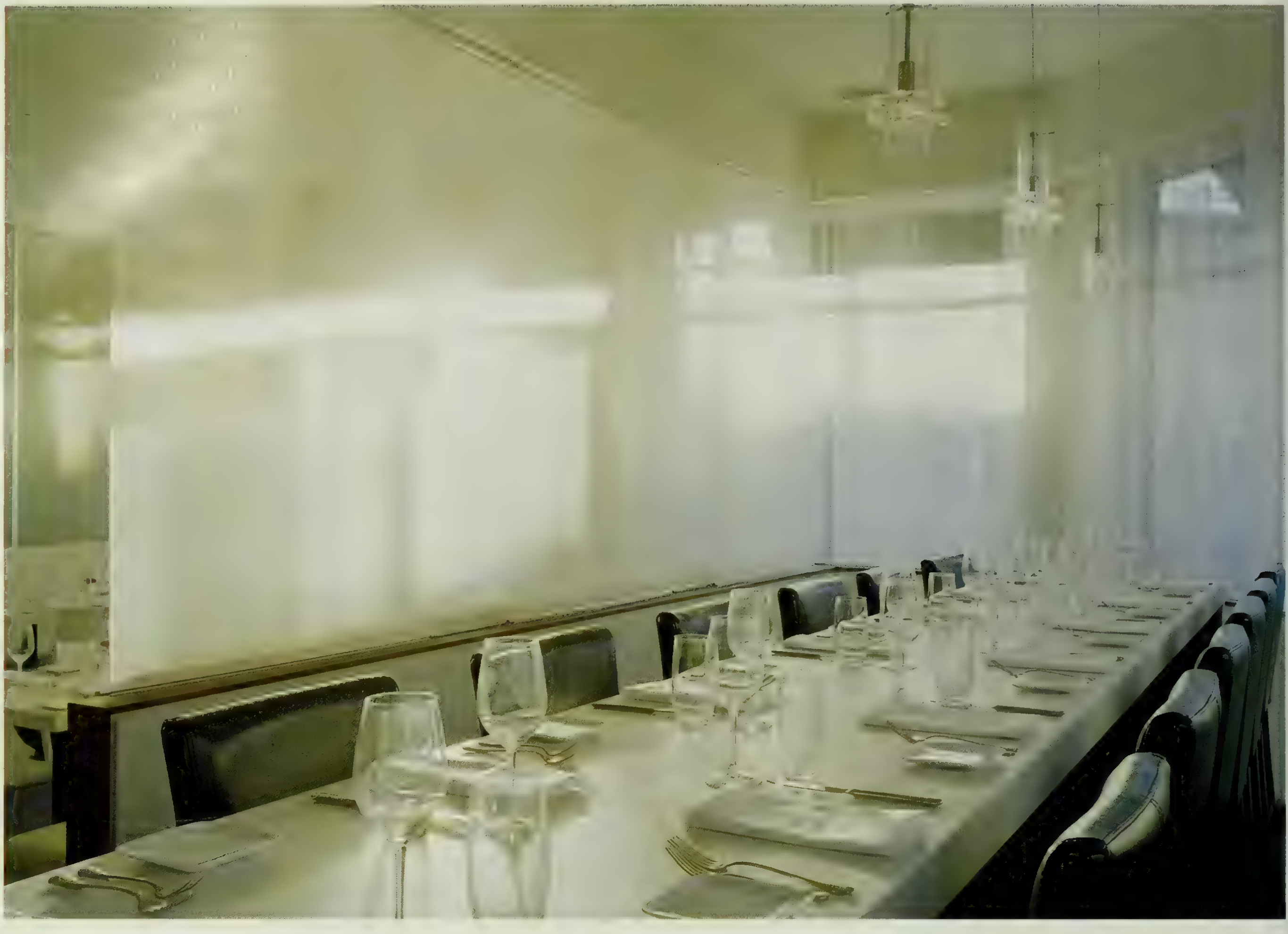
Guests enter Veil within a narrow space that bisects the dining and lounge areas. Bracketing a dark walnut reception podium, "wing wall" partitions of ½-inch-thick translucent glass frame and partially

John Peter Radulski is a freelance writer based in Westport, Conn. He frequently writes about interior design and architecture.





The entry frames the view on either side with translucent glass panels (right). Pink-gelled fluorescent lighting emphasizes intersecting planes. Fabric scrims separate the dining areas (opposite). Faux-leather panels, uplit coves, and a long table create a visual play of geometry in the lounge (above).



obscure views into the 40-seat lounge to the left and the 52-seat dining room on the opposite side. Fluorescents fitted with rose-hued gels outline the reception desk and the bar and seating niches beyond.

In the lounge, U-shaped nooks are lined with square wall panels of faux leather, which also upholsters the banquettes. A walnut-faced bar anchors one end of the room, while ottomans pull up to a long white Parsons table that defines the lounge's central axis.

The main dining room adjoins a more intimate space with an 18-seat table for private dining. Mahogany-edged drywall dividers separate the rooms, topped with sheer fabric scrims weighted with aluminum rods. Additional fabric panels cover the windows along the perimeter, lit to create a moiré effect. Alternatively, windows along the building's facade allow passersby a glimpse into the kitchen, a clear indication that voyeurism and restraint create pleasing visual counterpoints at Veil. ■

Project: *Veil, Seattle*
Architect: *Arai Jackson Ellison Murakami—Richard Murakami, AIA, partner in charge; Yuko Kunugi, designer; Bruce Ellison, Ben Pongprot*
Consultant: *Lumena Lighting Design*

Sources
Translucent panels: *Panelite*
Tables: *Heartwood*
Fixed seating: *J.H. Carr*
Chairs: *Driade*
Drapery fabric: *JF Fabrics*
Upholstery: *Nassimi*
Lighting: *Studio Italia Design; Birchwood Lighting; Cooper Lighting*

For more information on this project, go to Interiors at **www.archrecord.com.**

Italian pendants hang above a long communal table constructed of solid surfacing material (above).

Chairs designed by Philippe Starck complement banquettes upholstered in faux leather (below).

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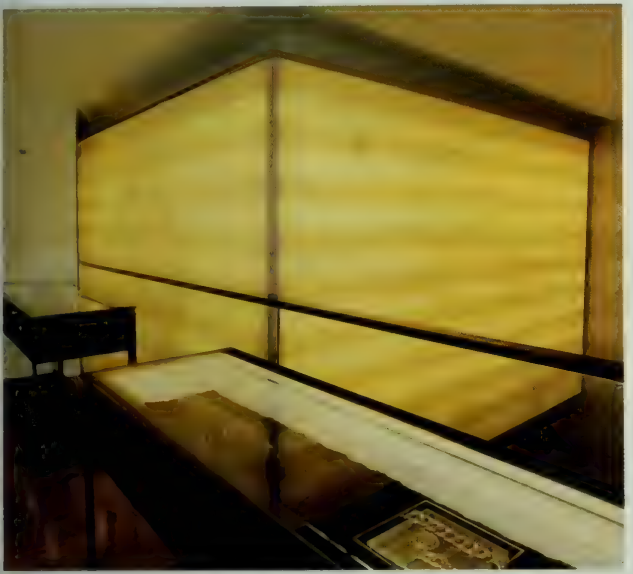
Interiors Products

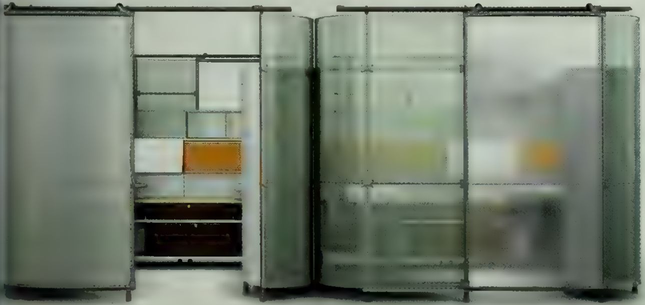
▼ Seamless fabric patterns

Tension fabric leader Transformit has developed a new proprietary technique to create tension fabric skins with subtle integrated patterns. The new technique produces surfaces with varying translucence, resulting in a tone-on-tone effect that can be combined with any custom design, pattern, or logo desired by the designer. Since the pattern is imbedded within the fabric, the appearance is smooth and seamless on both the interior and exterior. Shown below is the new technique applied to a dressing room at the Louis Vuitton store on 5th Avenue in New York City. Transformit, Gorham, Maine. www.transformitdesign.com **CIRCLE 201**



▼► Thinking outside of the cubicle

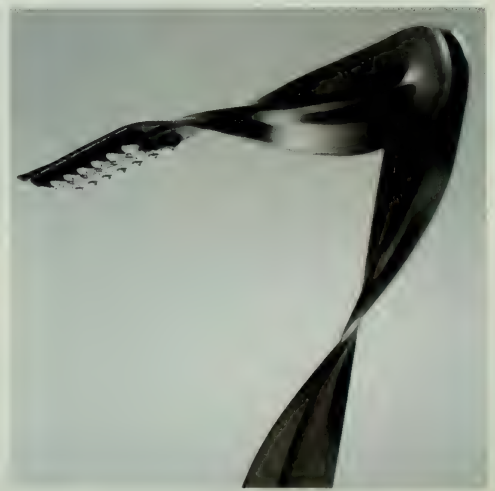
According to My Studio designer Douglas Ball, his new system for Herman Miller is not a cubicle but "an enclosure that makes people feel good." Designed specifically to attract and support "knowledge workers"—highly creative and independent employees who are in high demand—My Studio features an inverted systems landscape where the high walls are on the aisle side and the shortest walls are at the back, fostering conversations between people who work closer together. Best of all, it offers the most coveted feature of a private office—a door. My Studio is the first system designed according to the McDonough-Braungart Cradle-to-Cradle protocol. It consists of 74 percent recyclable components, is made from 28 percent recycled materials, and is GreenGuard certified. Herman Miller, Zeeland, Mich. www.hermanmiller.com **CIRCLE 203**



▲► Slatelike porcelain tiles

Vesale Stone from Marazzi Tile captures the rich tonal ranges and dramatic streaks of natural slate into the medium of glazed porcelain. Asynchronous glaze applications create dramatic pattern diversity, while a final granular frit application enhances slip-resistance and textural appeal. Available in four earth tones in 6½" modulars and mesh-mounted mosaics in three incremental sizes, the tile is suggested for residential, medium-commercial, and light-institutional floor and wall applications. American Marazzi Tile, Sunnyvale, Tex. www.marazzitile.com **CIRCLE 202**

► A cooler LED task light



Commissioned by Herman Miller to design the "Aeron chair of lights," Yves Béhar created the Leaf LED task light. The result of over three years collaboration between Herman MIller and Béhar's San Francisco–based studio fuseproject, Leaf features a thin profile derived from a vertical blade that extends and swivels up to 180 degrees while supporting a matching horizontal blade that can be folded closed for ambient light. Leaf keeps its LEDs cool to the touch through the use of an internal printed circuit board, engineered heat sink, and the stamp-formed, sculptural aluminum blade that allows heat to be dispersed without a cooling fan. An iPod-like control on the base manages both the light intensity and warmth of the LEDs at the stroke of a finger. Leaf's LEDs consume less than 12 watts of power and cut energy use by 40 percent compared to compact fluorescent task lights. Herman Miller, Zeeland, Mich. www.hermanmiller.com **CIRCLE 203**

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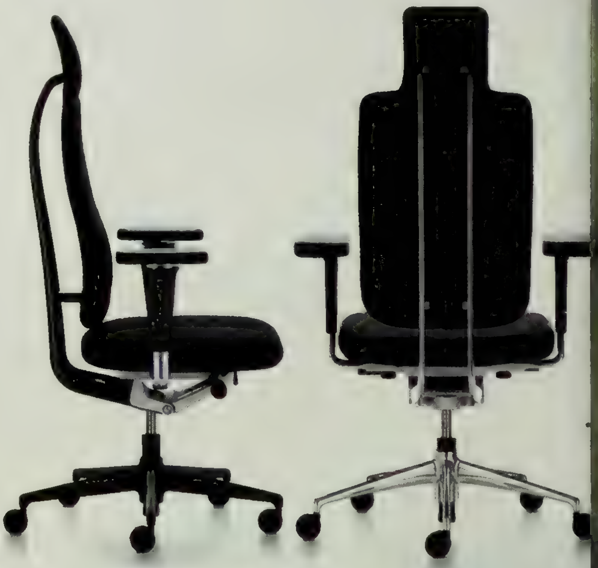
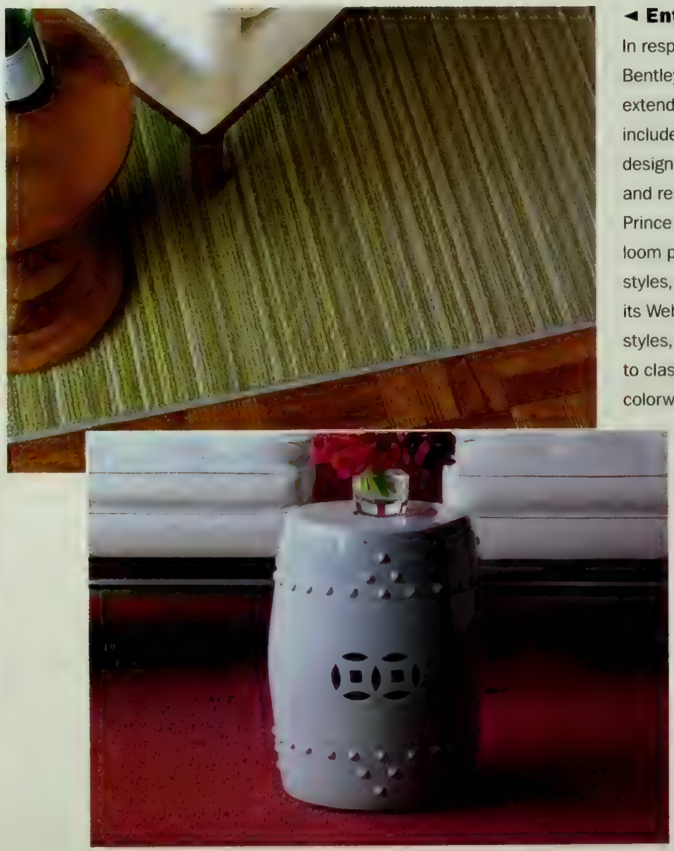
Interiors Products

► For laid-back types

Headline, a new office chair developed in collaboration with Mario Bellini and Claudio Bellini for Vitra, extends support beyond the traditional lumbar zone to the often neglected shoulder, neck, and head areas. A flexible plastic panel is suspended from the frame at the critical points of the lower back and neck by means of articulated joints. This allows Headline to support the body not only in an upright position, but also in a reclined position. In addition, Headline's backrest and headrest interact so that a person can lean back and still maintain a direct line of vision to a computer monitor or another person. Vitra, San Francisco. www.vitra.com **CIRCLE 204**





◄ Entering a new area

In response to customer requests, Bentley Prince Street has extended its product offering to include a new collection of designer area rugs for commercial and residential spaces. Bentley Prince Street will now offer broadloom products in a variety of rug styles, colors, and sizes through its Web site. A choice of seven styles, ranging from contemporary to classic, comes in six different colorways and three size options. Specifiers can also order samples via the Web site to see rug options before they order. Shown here is the Scan rug, in Checkout Line (top), and Crepe Suzette, in Cupcake (bottom). Bentley Prince Street is a subsidiary of Interface, Inc. Bentley Prince Street, Los Angeles. www.bentleyprincestreetrugs.com **CIRCLE 205**

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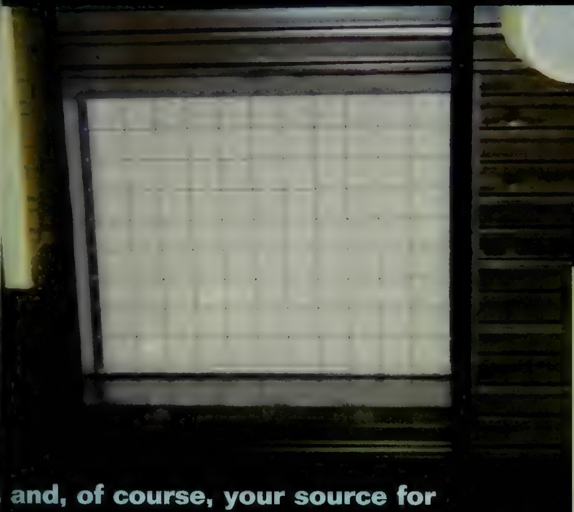

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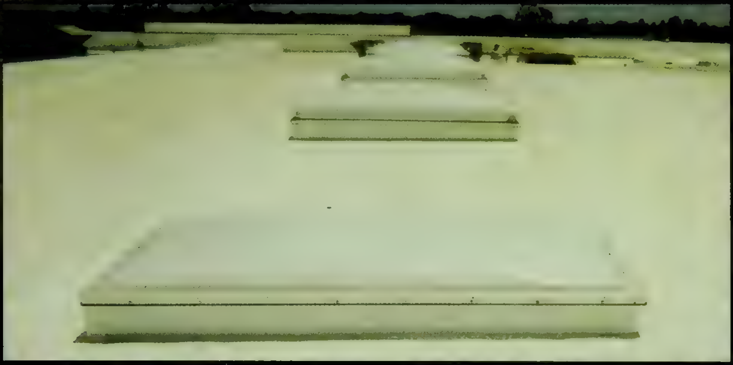

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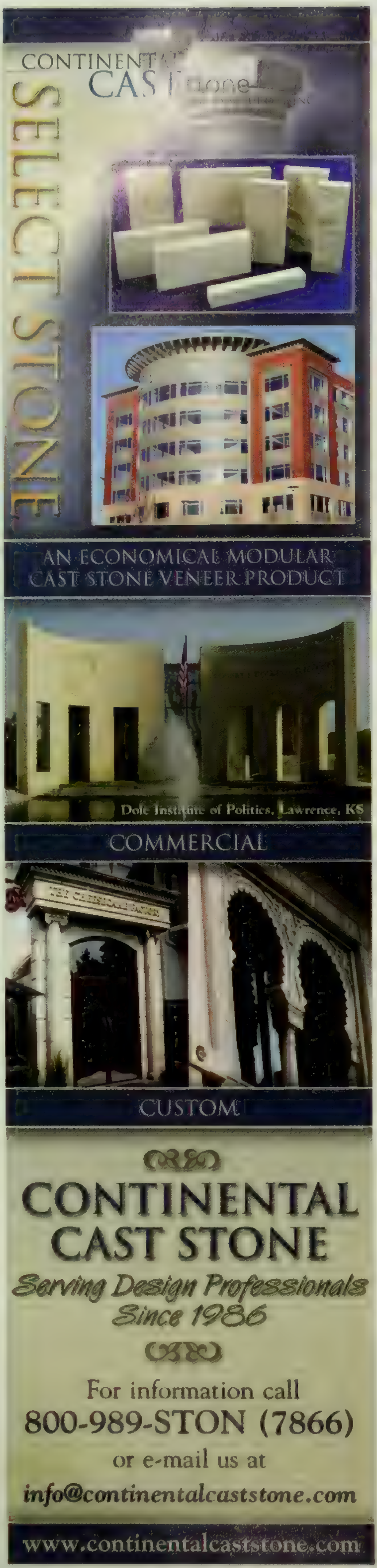

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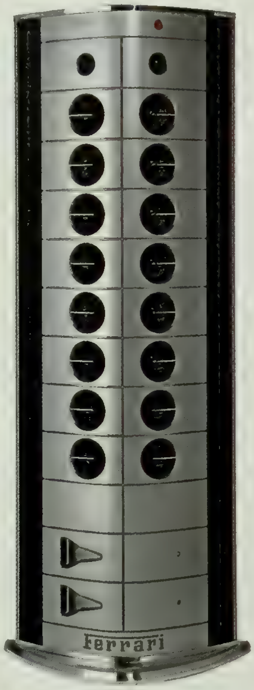
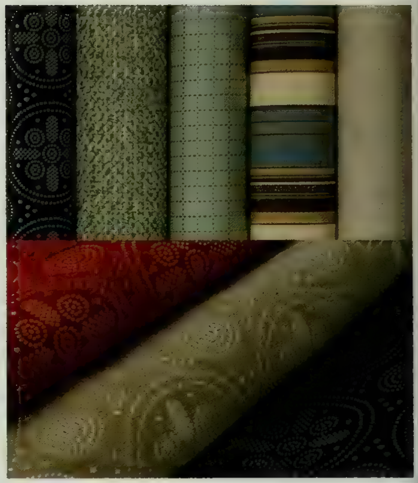
Interiors Products

▼ Sounds racy

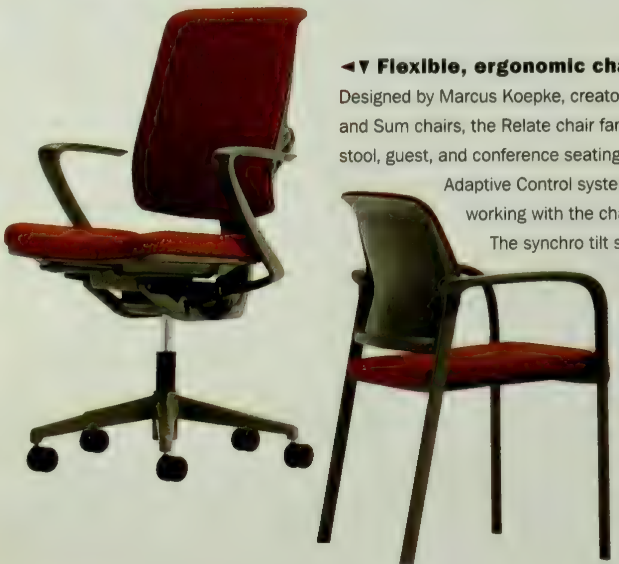
Ferrari has licensed David Wiener Ventures to create Art.Engine, a limited edition audio system that combines twin speaker arrays, wireless signal input, and digital electronics in a single tower designed specifically for the home or office. Inspired throughout the development process by Ferrari's engineering and standards, the speaker system features racing-style NACA cooling ducts, carbon fiber baffles, and a racing-carlike paint finish. Pressing the red "Engine Start" control button beams music wirelessly from a computer or from a plugged-in MP3, CD player, or satellite radio system. Art.Engine stands 47" tall, 16" wide, and 6" deep. David Wiener Ventures, Park City, Utah. www.dwvartengine.com **CIRCLE 206**





▲ Well dressed

Dorothy Cosonas has introduced her first upholstery collection for KnollTextiles since taking over as creative director last year. The five-part collection follows in the footsteps of Florence Knoll, who turned to fashion for inspiration. Coco is based on the rich, nubby texture of classic Chanel suiting, while Icon is inspired by current ethnic and embroidery trends found in fashion. Cross Stitch, woven in Scotland, is inspired by a men's windowpane plaid, while the final two patterns find inspiration in classic Glen Plaid and men's striped shirting. KnollTextiles, New York City. www.knolltextiles.com **CIRCLE 207**



◄▼ Flexible, ergonomic chair line

Designed by Marcus Koepke, creator of Allsteel's award-winning #19 and Sum chairs, the Relate chair family is a flexible collection of task, stool, guest, and conference seating. Relate's newly developed Body Adaptive Control system integrates a pivoting back working with the chair's synchro tilt mechanism: The synchro tilt senses the user's weight and tensions the control automatically; the pivoting back supports the spine in a variety of positions to then encourage movement. Relate's replaceable seat and back upholstery, arm pads, and overall back assemblies make it practical for education or health-care environments. Allsteel, Muscatine, Iowa. www.allsteeloffice.com **CIRCLE 208**

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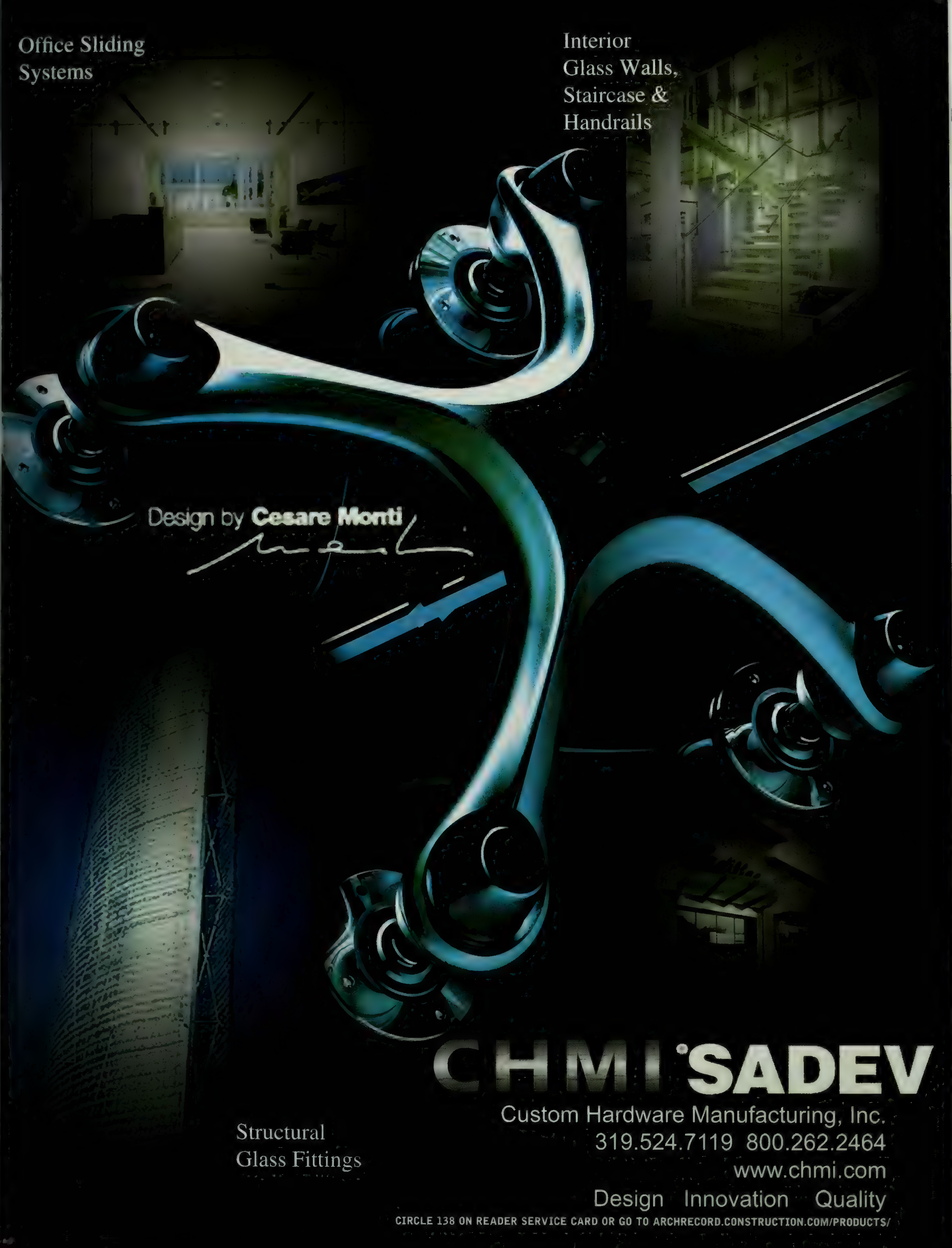

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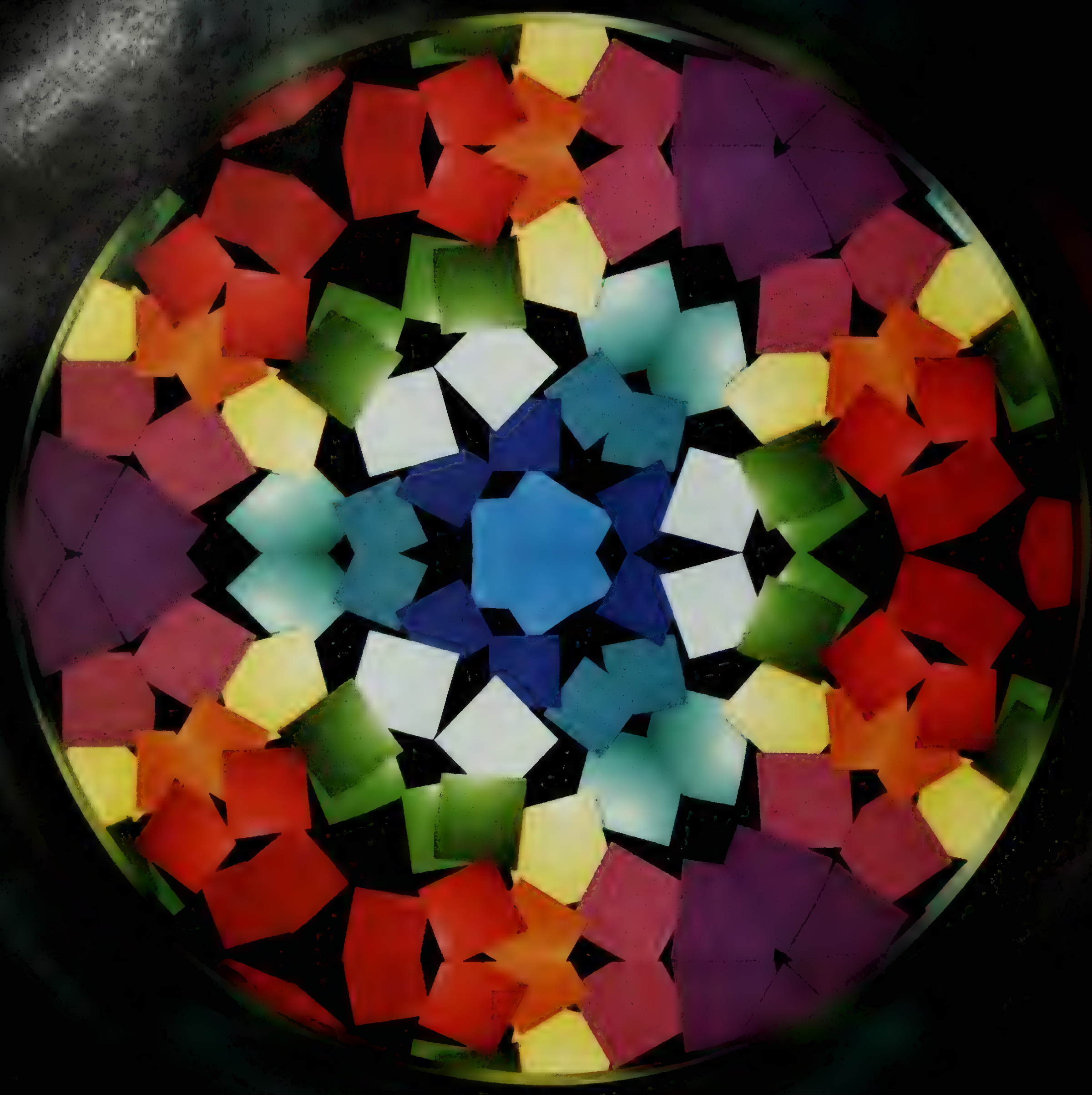

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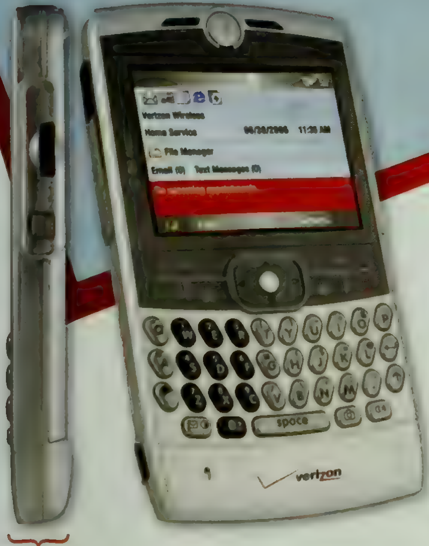

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Design outside the box

Renaissance / San Diego, California

The twin-tower Renaissance residential condominium project in downtown San Diego evokes the feeling of being in a terraced garden site in the middle of the city. Designers at Carrier Johnson Architects incorporated the open, airy, feeling to the lobby interior and satisfied the code requirement for smoke protection at the elevator. Concealed artfully in a valance above the elevator, the Smoke Guard system enables the elevator to open directly into the lobby. Visit us in **booth 2338** at the **2006 AIA Expo**, we'll show you how the Smoke Guard system can help you to "design outside the box."

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Products

Carpet

While the majority of carpets featured this month are for **contract applications**, we kick off with a residential product from a company familiar to the hospitality market. This year, expect to see several introductions made with **Antron Brilliance**, a new fiber innovation offering more vibrant color. *Rita Catinella Orrell*

Left, top to bottom: Tricycle's SIM virtual, paper-print samples are shown here in Nymph (Chocolate), Aurora (Vintage White), and Intaglio (Lemongrass). Right, top to bottom: Real samples of the carpet line in Aurora (Vintage White), Crosscombe (Mushroom), Occurrence (Sage), Morris (Oat), and Coquette (Chocolate).

A residential wool broadloom with low environmental impact

A 25-year veteran of the hospitality and corporate carpet industries, Clayton Miller has entered the residential market with Nest Carpets, a new brand of textured wool broadloom. Constructed exclusively of Wools of New Zealand fibers, the carpets are produced on the high-end Infinity tufting machine, which has the ability to create more than 250 pile heights within 1 square inch.

Sixteen textured, multilevel loop broadloom patterns, including repeats of organic and geometric designs, are available in eight colors ranging from white to chocolate.

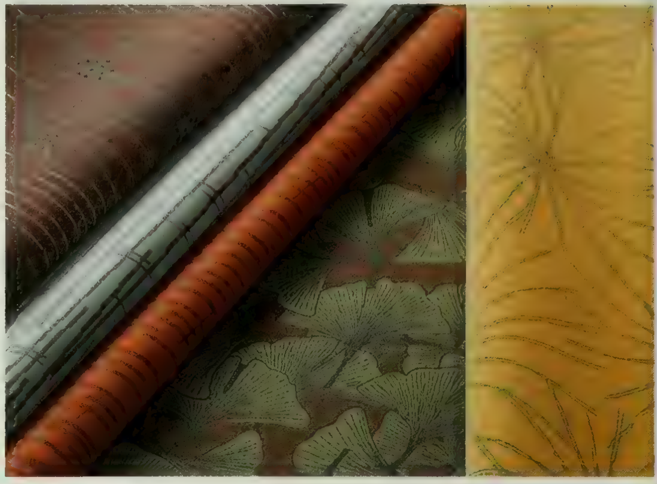
Nest is the first residential brand to offer Tricycle's SIM digitally modeled carpet samples that use 95 percent less energy and water than required to create a real carpet sample. Each SIM comes as a realistic paper print that is 100 percent recyclable. SIM prints are not intended to replace the final sample but to reduce the number of traditional samples produced. In addition to employing virtual sampling, Nest Carpets' wool is harvested from free-grazing sheep, is naturally biodegradable, and employs preparation and spinning methods that use ⅙ to ⅓ of the energy required to produce polypropylene and nylon fibers. Nest Carpets, Dalton, Ga. www.nestcarpets.com **CIRCLE 209**

◄ Good companions

Realm and Radius are two of the latest offerings from J&J Commercial. Realm is a subtle wave that spans the width of the carpet and features a tailored pinstripe running perpendicular to the wave. Paired with Realm is Radius, a simple stripe that mimics the background of Realm and works as a companion. Constructed with Encore SD Ultima nylon, both products are standard as broadloom and offered in a Nexus modular option. J&J Invision, Dalton, Ga. www.jj-invision.com **CIRCLE 210**

► A tailored fit

Tailor-Made, Classic Fit, and Everywear are three new solutions for corporate and retail market applications. The three coordinating designs include a plaid, geometric, and tweed pattern in a range of scale and color options for multiple design possibilities. Each is available in a 12' width with UltraBac Plus and a 24"-square modular. Available in 16 colorways, custom colors can be specified for a 133-yard minimum. Mannington Commercial, Calhoun, Ga. www.designline.mannington.com **CIRCLE 212**



▲ Healing pathways

Designed by Linda Porter Bishop, a senior interior designer and health-care specialist at Houston-based WHR Architects, the Moments Collection, from Lees' NeoFloor brand, showcases a naturally inspired design, while its dense construction facilitates the easy movement of wheelchairs and gurneys. Offered in a 6' width, the collection comprises designs inspired by bamboo, roses, pine cones, and gingko leaves in five colorations. Lees Carpets, Kennesaw, Ga. www.leescarpets.com **CIRCLE 211**

▼ Chameleon carpet tiles

The Cocoon carpet-tile collection is specifically designed to allow multiple patterns (or no pattern at all) to emerge, depending on the way the tiles are arranged on the floor. The stain-resistant, Class I–rated, 36"-square tiles feature the TractionBac nonadhesive installation system, which allows the tiles to be moved at any time. Several color combinations are possible (yellow/purple shown, left, in a classroom environment). Binvetec, Tustin, Calif. www.binvetec.com **CIRCLE 213**

◄► Layers of color and protection

Milliken Hospitality has launched Etage (left), a new layered approach to modular carpet design. The collection's five design packages are created in multiple layers; designers simply select the pattern layers they want and then build the final design by overlaying one on top of another. Designed by HDR, a leading health-care firm in the United States, the Sense modular collection (right) was created to stand up to the extreme conditions of a health-care environment and feature stain- and soil-resistance and roller mobility. Twelve patterns draw from nature, aromatherapy, and philosophies of holistic healing. Milliken Carpet, LaGrange, Ga. www.millikencarpet.com **CIRCLE 214**

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Product Briefs

▾ Anniversary present

To mark its 10th anniversary, Henry Hall Designs introduced the limited-edition Monolith Bench. Combining the warmth of plantation-grown teakwood with marine-grade SikaFlex adhesive and sealant, the bench measures just over 8½' long, 22" deep, and 26" high. Designed by Belgium-based Wim Segers, Monolith is being manufactured in an exclusive production run of 25; each bench will be branded with its series number. A natural unfinished teakwood or a sealed teakwood finish are available. Henry Hall Designs, San Francisco. www.henryhalldesigns.com **CIRCLE 215**

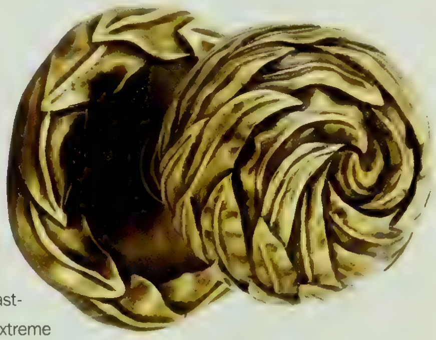
▸ Pots of gold

To offer a solution for well-designed homes that have chimneys with unsightly metal caps exposed at the top, architect Jack Arnold created European Copper chimney pots. UL-listed and International Building Code–compliant, the pots are the only models compatible with both masonry and pre-engineered fireplaces. A patented vent system at the base of each pot improves airflow while keeping out rain and pests. Made of stainless steel and copper, the lightweight pots can withstand hurricane-force winds, seismic shifts, and extreme heat and cold. They are available in round, square, or octagonal shapes in a range of sizes in either a New Penny or Patina finish. Depending on the width of the chimney, one, two, or even three chimney pots are suitable. Shown above is the Bishop pot next to the larger-size Bishop II model. European Copper, Tulsa. www.jackarnold.com **CIRCLE 218**

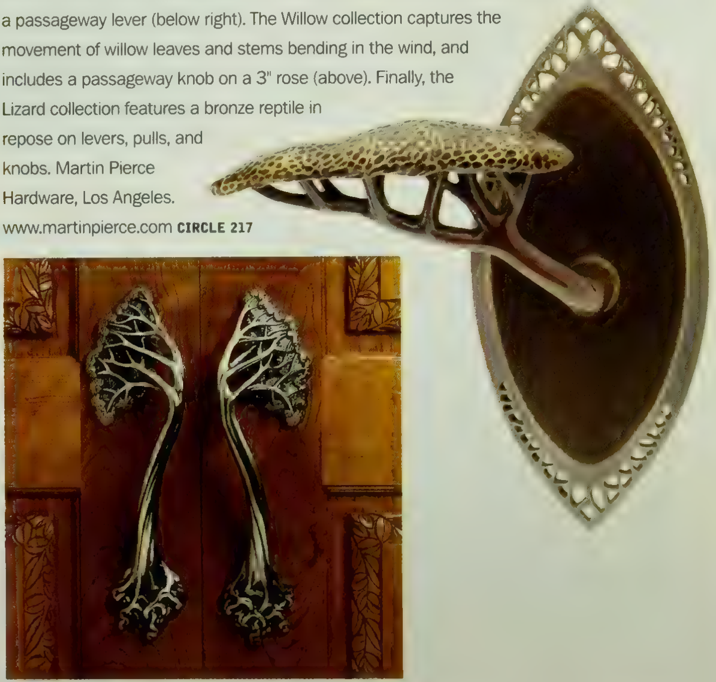
▴ Putting the kitchen on display

In March, Poggenpohl opened its flagship New York showroom and introduced the Plusmodo kitchen system to the U.S. market. Designed by renowned product designer Jorge Pensi, Plusmodo is claimed to be the world's first hingeless-cabinet-door kitchen. Clear glass pullout trays in the base unit, illuminated satin-glass parallel shelves in the wall unit, and vertical lighting elements in the appliance area turn even mundane kitchen items into art objects. Poggenpohl U.S., Fairfield, N.J. www.poggenpohl-usa.com **CIRCLE 216**

▾▸ Into the woods



British-born, L.A.-based sculptor and furniture maker Martin Pierce has introduced a new collection of bronze cast hardware and cabinet pulls. Trained as a wood carver, Pierce begins his process by sculpting designs (based on original sketches) into bass wood or blue jewelers wax. Utilizing the lost-wax casting method, he creates pieces with extreme detail and character. The Hedgerow collection was inspired by the hedges found in the English landscape and includes Heroic door pulls (bottom) and a passageway lever (below right). The Willow collection captures the movement of willow leaves and stems bending in the wind, and includes a passageway knob on a 3" rose (above). Finally, the Lizard collection features a bronze reptile in repose on levers, pulls, and knobs. Martin Pierce Hardware, Los Angeles. www.martinpierce.com **CIRCLE 217**



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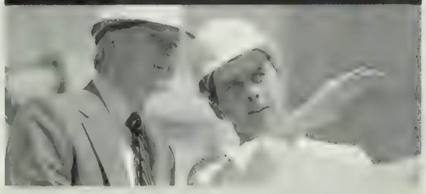

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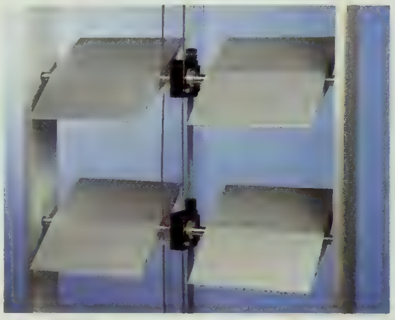
Product Briefs

▲► Luxurious textile collection

Based in Vermont, Laura Lienhard Textiles offers a collection of contemporary high-end fabrics for residential and commercial interiors. Distinctive weaves, textured plains, jacquards, and sheers remain true to their hand-loomed beginnings. Inspired by the image of rain falling against the landscape, the Rain-Stripe pattern (left, shown in Turquoise) was developed from a series of Laura Lienhard's original woodcuts. Woven in Switzerland in a poly/cotton blend, the jacquard comes in four colors and two coordinating solids. Mesa (right, shown in Cayenne) is a handwoven modern interpretation of a traditional flame-stitch pattern woven domestically in cotton and wool. Laura Lienhard Textiles, Burlington, Vt. www.lauralienhard.com **CIRCLE 219**



◄ Heavy duty actuator system

Elero, a newcomer to the U.S. building-products market, has specially developed the Vitroline rack and pinion actuator system for high dynamic forces and high static loads. The system's highly efficient drive solution allows for entire banks of facade elements to be actuated synchronously along a single glass frontage, controlling the glare intensity of a complete floor area or atrium in unison. Featuring a corrosion-proof and lubricant-free track, Vitroline is well suited for harsh climates. Elero, Poessneck, Germany. www.elero.com **CIRCLE 220**

► Resilient flooring extension

Armstrong has updated four of its homogenous and inlaid sheet vinyl lines—Medintech, Medintech Tandem, Possibilities Petit Point (right), and Connection Corlon—and introduced a new visual called Royal. The most significant improvement is the conversion from felt-back to fiberglass backing on Connection Corlon and Possibilities Petit Point that enhances their flexibility for easier handling, simpler installation, and greater dimensional stability. Possibilities Petit Point provides the soft textural visual of carpet with the benefits of resilient flooring. Its expanded palette of 28 health-care-focused colors provides easy coordination with other Armstrong lines. Armstrong, Lancaster, Pa. www.armstrong.com **CIRCLE 221**

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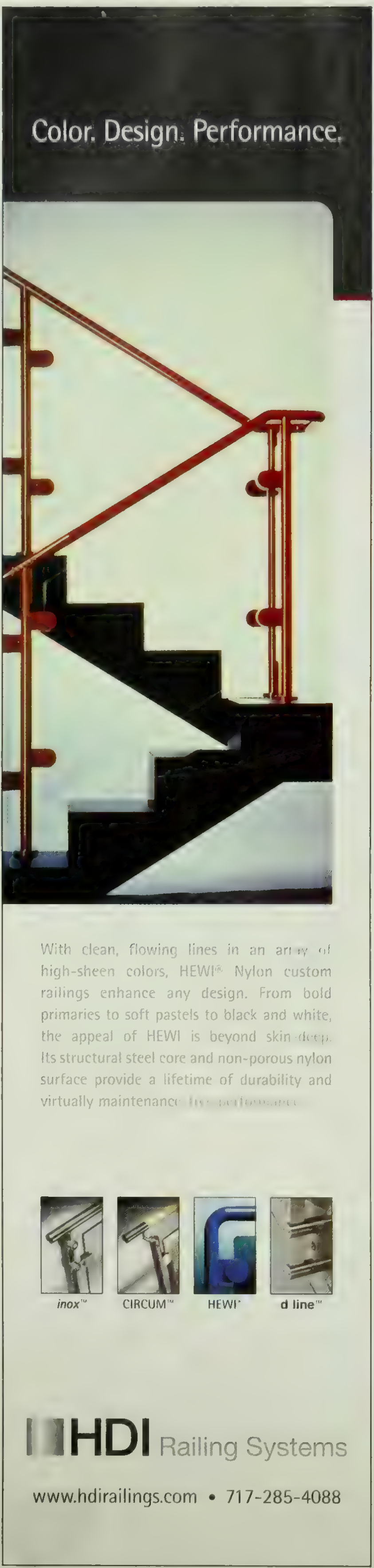

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Product Briefs

▼ New draperies for indoors and out

Conrad introduces two new custom handwoven window coverings, Sahara (left) and Scirocco. Sahara is a honey-hued textile with a quiet sheen that is available as a traditional Roman fold shade with textured horizontal banding, or as a rich drapery with subtle vertical striping. Scirocco, available as a Roman fold shade, is created by weaving strands of sun-bleached hemp with a continuous warp that lends a smooth, supple texture. Also new from Conrad is the Tahoe Collection of drapery for outdoor living spaces, including loggias, terraces, or poolside cabanas (Alpine in Aspen, right). Three new outdoor draperies feature resilient, solution-dyed acrylic that can weather the elements. Conrad, San Francisco. www.conradshades.com **CIRCLE 222**

► Motorized drapery family

MechoShade Systems has introduced the WhisperTrak family of motorized drapery products. Available in lengths up to 59', WhisperTrak can be installed in either curves or straight configurations. The system's three interchangeable motor models vary in price, performance, and control. The 6200 system, the most powerful drapery system, can carry a maximum weight load of 220 pounds and is programmable up to five stop positions; 6302 is medium duty and is capable of handling 88 pounds of drapery over 32' with curving ability; while 6300 is lighter-duty, economical, and capable of handling 44 pounds of drapery over 18' for straight tracks only. MechoShade Systems, Long Island City, N.Y. www.mechoshade.com **CIRCLE 223**

◄ Time-saving prefab wood backers

Manufactured by Dietrich Metal Framing and marketed by Arch Wood Protection, the Danback wood backing system for steel-framed construction claims to save 90 percent of the time required to install individual backers. Danback units are 48" precut assemblies suitable for 16" or 24" on-center framing. They are intended to help anchor shelves, counters, sinks, and other wall fixtures. Plywood sections of the Danback system are made of termite- and fungus-resistant Dricon fire-retardant-treated wood. Arch Wood Protection, Smyrna, Ga. www.dricon.com/danback **CIRCLE 224**

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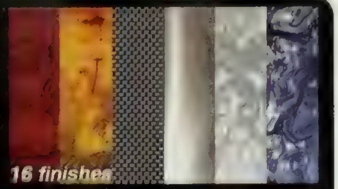

Alsa's new ***Dichro Glass Tile***™ offers the sensational look of real dichroic glass at a fraction of the price!

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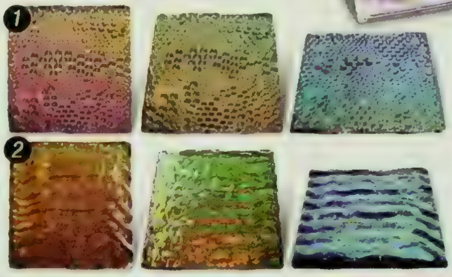

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Product Resource: Literature

Easier on the color palette

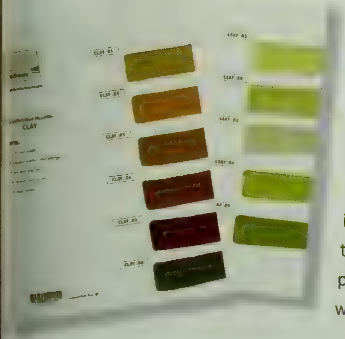
With the the launch of Azrock's ColorWorks system and SolidAire tile, the brand offers a more user-friendly series of collateral materials, including an architectural binder, a set of carry boards, and a brochure. The materials feature all of the products within the ColorWorks system at once. Tarkett Commercial, Houston. www.tarkett.com **CIRCLE 225**

Refreshed lighting catalog

The Ultralights 2006 catalog features a few updates, including a new collection of sconces, brackets, and pendants; the phasing out of older finishes and the introduction of new options; new fixture additions interspersed throughout existing collections; and a "Design Your Own Light" feature that provides specifiers with more color, lamping, and diffuser alternatives than before. Ultralights, Tuscon. www.ultralightslighting.com **CIRCLE 226**

Comprehensive cast-stone catalog

Haddonstone, a supplier of cast-stone architectural features and landscape accents, has launched a new 200-page catalog marking the first time the entire range of Haddonstone companies (including Haddonstone, Haddoncraft Forge, and Glass Houses) has been grouped together. Haddonstone, Pueblo, Colo. www.haddonstone.com **CIRCLE 227**



Real paint swatches

Yolo Colorhouse offers cards for each of its seven paint collections that feature strips of real paint. The company also offers giant reusable and repositionable color swatches made with real paint that eliminates the design challenge of choosing from tiny ink-printed color chips, and the issue of disposing of sample quarts of paint. Yolo Colorhouse, Portland, Ore. www.yolocolorhouse.com **CIRCLE 228**

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Energy costs around the world are rising. Even the slightest increase in electric prices causes the operating costs for a typical building to rise. Fortunately, with the implementation of a proper daylighting design, building owners can save up to 75% of the energy used for lighting a building. Turning off or dimming lights when not needed can also save 10% - 20% of the energy used to cool a building. Installing Bilco's Lumivent® fire vents will vent smoke, heat, and noxious gases in the event of a fire as well as allow natural lighting to illuminate warehouses, manufacturing plants, and other facilities with large expanses of unobstructed space and further reduce energy costs.

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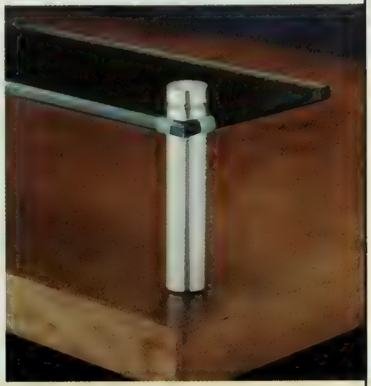

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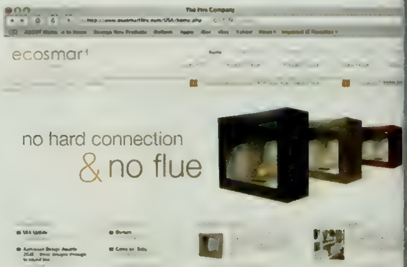
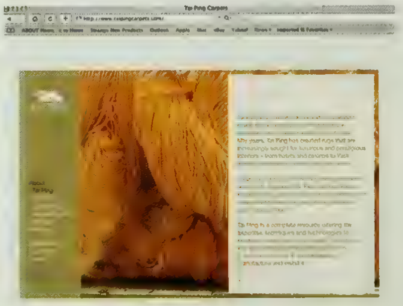
Product Resource: On the Web

www.ecosmartfire.com



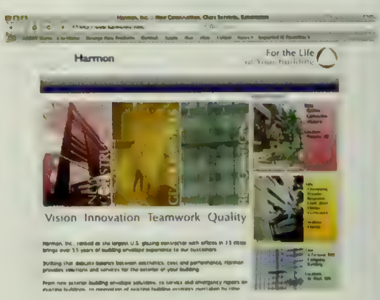
Intended to showcase the diversity of its flueless fireplace range, Ecosmart Fire has given its site a complete facelift. A "back end" FTP library resource for specifiers gives 24/7 access to technical information, drawings, price lists, images, and more. Upon entering the site, users are given the option to subscribe to an e-newsletter, which will be localized to individual countries in the near future.

www.taipingcarpets.com



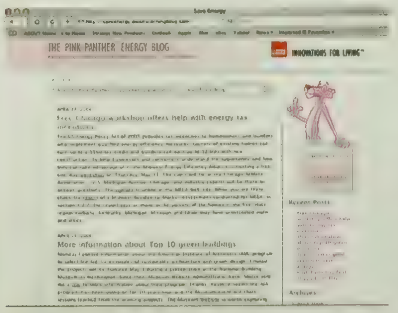
Tai Ping's beautifully illustrated new site includes background information on the company—including the story behind its tent logo—as well as a roundup of products and services. The products section features a collection of custom carpet and rug images worthy of any magazine spread, although it would benefit from the addition of a description of the items on display.

www.harmoninc.com



Speciality glazing contractor Harmon has launched a new site for its New Construction, Glass Services, and Renovation lines. The straightforward site doesn't offer a lot of fancy touches, but its clear navigation allows visitors to quickly find out what Harmon does and where it is doing it.

http://saveenergy.owenscorningblog.com



The Pink Panther Energy Blog, launched in April from Owens Corning, is intended to be a blog by the company's corporate mascot that will discuss the issues of saving energy through proper home insulation. While professionals might find some parts frivolous—an "About Me" link includes a list of the Panther's favorite movies—the regular postings on home insulation and energy-efficiency issues could be of interest.

My turn

Ken M. Tse, AIA, LEED AP
Senior Designer VP, HKS, Inc.
Dallas, Texas

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Wes Thompson Photography

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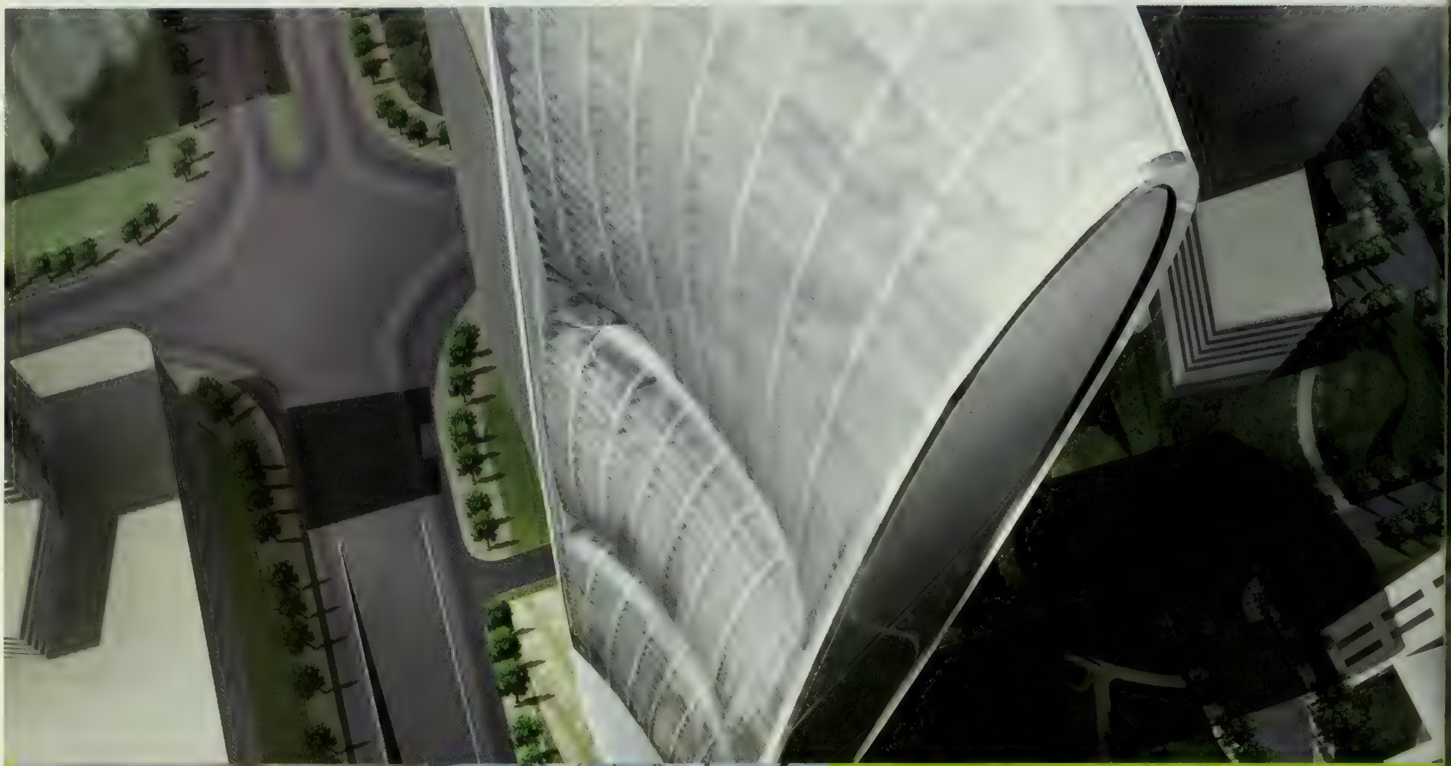

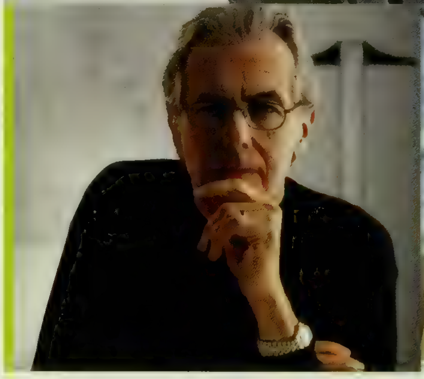

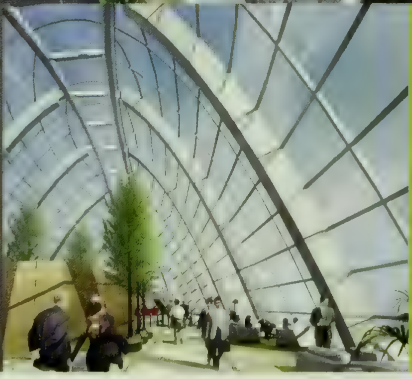

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2x8: Swell Exhibit
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June 6–14, 2006
This annual exhibition sponsored by the AIA/L.A., showcases exemplary student work from architecture and design institutions throughout California. At the Gas Company Lofts. Visit www.aialosangeles.org.

AIA/LA Tours
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With over 100 tours of diverse and complex architecture, AIA/L.A. has gathered top professionals, world-renowned artists, and a variety of design and architecture styles to innovate, engage, and inspire. For a full list of both professional and guest tours, visit www.aialosangeles.org.

Seattle Architecture Foundation Ideas in Form 9: Architectural Model Exhibit
Seattle
June 9–July 8, 2006
Seattle Architecture Foundation (SAF) uses its annual *Ideas in Form* architectural-model exhibition to educate the general public about the creative process. The show features 80 to 100 projects still on the boards, under construction, and recently completed by Northwest architects or architects designing projects in the Northwest. This year's exhibition will be open daily in the Rainier Square Atrium in Downtown Seattle, 1333 5th Avenue, First Level. For additional information, call 206/667-9184 or visit www.seattlearchitecture.org.

Cantilever-Chairs: Architectural Manifesto and Material Experiment
Vienna
June 14–October 29, 2006
The Cantilever-Chair represents one of the most significant products of avant-garde design in the 1920s. These steel tube chairs stem from the Bauhaus movement and the German Werkbund, and still challenge architects and designers today to experiment anew with their form and material.

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Prairie Skyscraper: Frank Lloyd Wright's Price Tower
Washington, D.C.
June 17–September 17, 2006
Organized by Price Tower Arts Center (Bartlesville, Oklahoma) in cooperation with The Frank Lloyd Wright Foundation (Scottsdale, Arizona), Prairie Skyscraper will present for the first time a comprehensive selection of the Arts Center's collection of historic artworks and objects relating to the Price Tower, including never-before-exhibited Wright documents and drawings from its own holdings and from those of the Wright Foundation's archives. On view will be approximately 108 drawings, models, photographs, documents, building components (such as exterior copper panels and louvers), and furnishings. The latter objects—including desks, chairs, tables, and textiles that were designed for the Price Tower by Frank Lloyd Wright—reflect the architect's conception of the building as an integrated work of art. At the National Building Museum. For more information, call 202/272-2448 or visit www.nbm.org.

Artist's Choice: Herzog & de Meuron
New York City
June 21–September 25, 2006
The 7th exhibition in MoMA's Artist's Choice series, in which contemporary artists are invited to select, juxtapose, and comment on works from the museum's collection. Drawing from across the museum's departmental collections, the internationally renowned architects Jacques Herzog and Pierre de Meuron approach the collection not as conventional curators, but as architects. At the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.

Young Architects Program
Long Island City, Queens
Opens: June 22, 2006
The New York City–based firm OBRA, led by Pablo Castro and Jennifer Lee, has been selected as the winner of the seventh annual MoMA/P.S.1 Young Architects Program, which invites emerging architects to propose a building project for P.S.1's courtyard. The OBRA installation will open in June. The objective of the Young Architects Program is to identify and provide an outlet for emerging young talent in architecture. At P.S.1. Call 718/784-2084 or visit www.ps1.org.

AIA New York Chapter Design Awards Exhibition
New York City
Opens: June 29, 2006
Award recipients will be invited to exhibit presentation boards, models, and videos. The luncheon honoring the recipients will be held June 28 at 7 World Trade Center. At the Center for Architecture. Visit www.aiany.org/designawards.

Gritty Brits: New London Architecture
Pittsburgh
September 30, 2006–January 28, 2007
In recent years, a new generation of architects, operating from London's postindustrial East End, has become intimately engaged with England's contemporary urban condition. The exhibition comprises key works in recent English architecture by these "Gritty Brits," together with aspects of urbanization and visual culture (music, literature, film, fashion) in contemporary London. Participating architects include David Adjaye, Caruso St John, FAT, Niall McLaughlin, Muf, and Sergison Bates. Also included is an appraisal of

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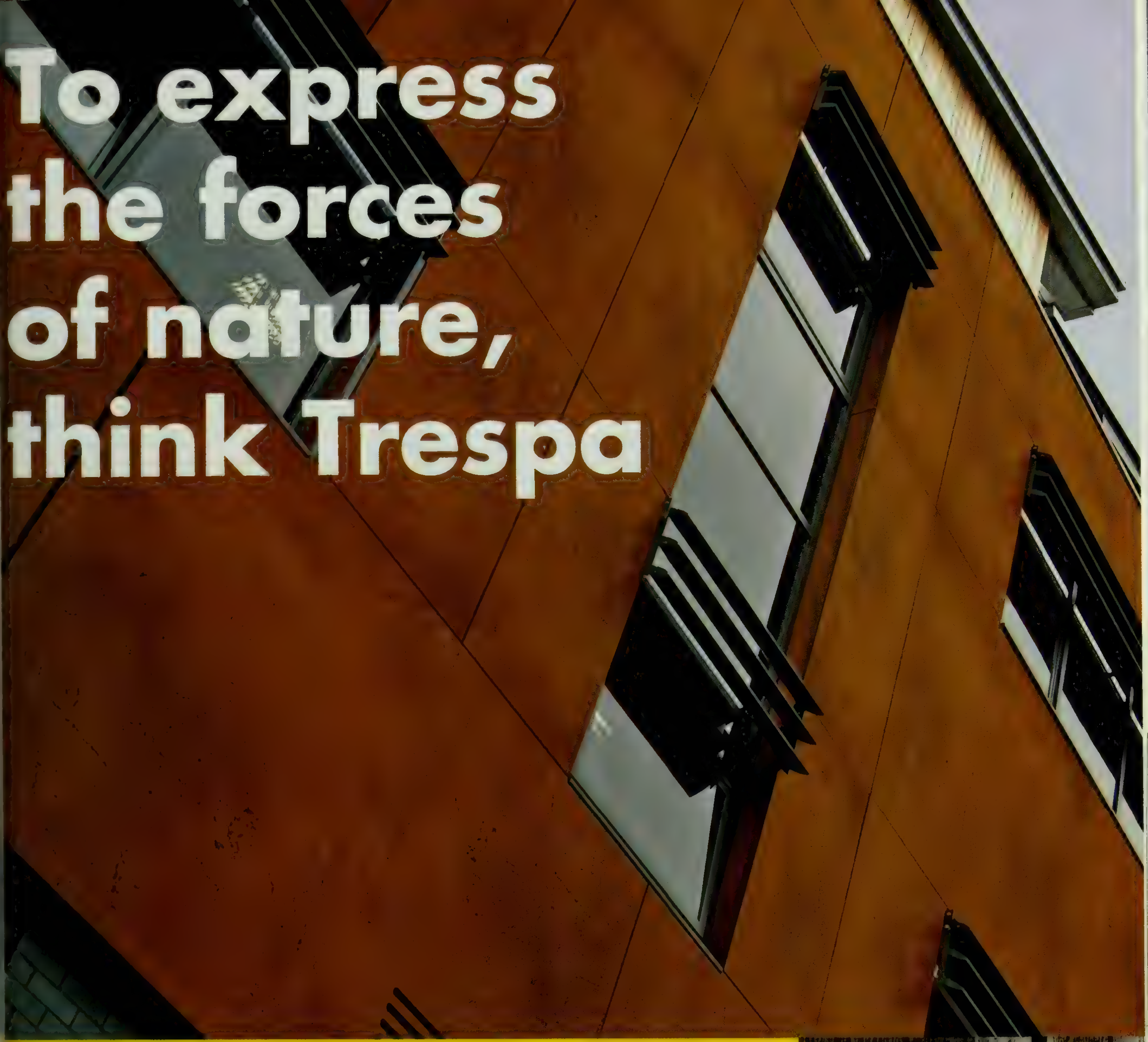

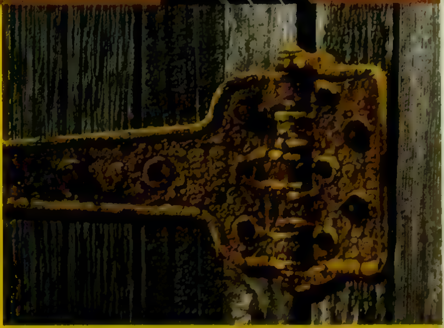

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the architecture of the 1950s, which has reemerged as an influence to this generation. At the Heinz Architectural Center. Call 412/622.3131 or visit www.cmoa.org.

Ongoing Exhibitions

Barcelona in Progress
New York City
Through June 11, 2006
An exhibition presenting Barcelona's dramatic post-Franco transformation, through the present. Architectural models, renderings, and photographs outline a framework for the progressive urban trajectory this city has chartered, and a global context for evaluating developments in large-scale metropolitan planning. At the Center for Architecture. Call 212/683-0023 or visit www.aiany.org.

Ettore Sottsass
Los Angeles
Through June 11, 2006
Italian designer and architect Ettore Sottsass is internationally acclaimed for his contribution to product design, furniture, ceramics, glass, jewelry, silverwork, and architecture. This retrospective exhibition of his work includes approximately 100 objects arranged chronologically and by specific media, in an installation conceptualized by Sottsass himself. At the Los Angeles County Museum of Art. Call 323/857-6522 or visit www.lacma.org.

Instability: Young Architects Forum 2006
New York City
Through June 14, 2006
In its 25th year, the exhibition provides a forum for the discussion of the entrants' ideas and work. This year's theme, "Instability," questions how young architects define their practice in the midst of shaken institutions, weakened states of normalcy, and defunct analytical models. Participation is open to designers 10 years or less out of school and exhibitors are chosen by a portfolio competition juried by distinguished architects, artists, critics, and the Young Architects Committee, comprising previous entrants, who develop the theme. At the Architectural League's Urban Center Gallery. Call 212/753-1722 or visit www.archleague.org.

Southpoint: From Ruin to Rejuvenation—ENYA International Ideas Competition Exhibition
New York City
Through June 17, 2006
The Emerging New York Architects (ENYA) Committee presents an exhibition of the second biennial International Ideas Competition. The exhibition features 77 visions for a Universal Arts Center at Southpoint Park on Roosevelt Island. ENYA Prize recipient, second place, third place, student prize, and historic preservation award, along with 42 selected entries, are included in the accompanying catalog. At the Center for Architecture. For more information, call 212/683-0023 or visit www.aiany.org.

Secret Cities: Extraordinary Urban Photography
Chicago
Through June 17, 2006
The contemporary photographers in this exhibition are poets of light and shadow. Included in the show are works by Christophe Valsecchi, John Kimmich-Javier, Darris Lee Harris, Alex Fradkin, Jay King, Tony May, and Madeline Doering. At ArchiTech. For more information, call 312/475-1290 or visit www.architechgallery.com.

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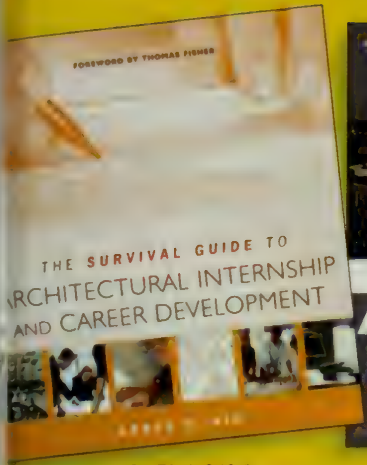

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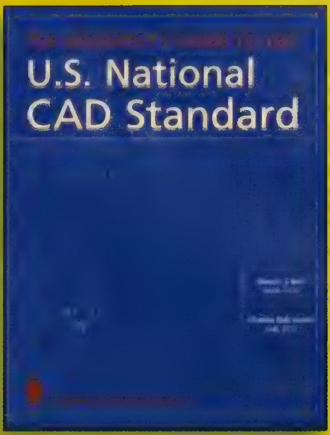

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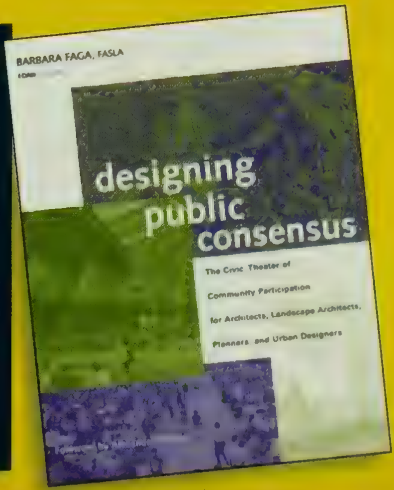

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Dates & Events

Norman Foster: Space and Time
Moscow
Through July 2, 2006
A major new exhibition on the work of Foster and Partners explores key themes in the firm's work, encompassing a diverse range of international projects over a number of years. The subjects include historic and cultural buildings, towers, sustainability, and infrastructure. At the Pushkin State Museum of Fine Arts. Call 203-79-98 or visit www.museum.ru/gmii.

Morphosis
Paris
Through July 17, 2006
Sixteen projects (layouts, drawings, photographs, etc.) from Morphosis, currently involved in the construction of numerous buildings, are on view to convey the idea of architecture as "in the act." Screens and Web cams open windows onto buildings in operation or sites under way in order to follow their evolution. At Centre Pompidou. Visit www.cnac-gp.fr/pompidou.

Vaults of Heaven: Sanctuaries of Byzantium
New York City
Through July 28, 2006
An exhibition of 30 large-format color photographs of some of the greatest examples of Byzantine architecture. Captured by the renowned Turkish photographer and architect Ahmet Ertug, the striking images reveal in astonishing detail the extraordinary churches and sanctuaries of ancient Byzantium. At the World Monuments Fund Gallery. For additional information, call 646/424-9594 or visit www.wmf.org.

Julius Shulman, Modernity and the Metropolis
Washington, D.C.
Through July 30, 2006
This exhibition offers highlights from the recently acquired archives of Julius Shulman, the internationally renowned photographer whose iconic images helped to define Modern architecture. His photographs, such as those of Richard Neutra's Kaufmann House in Palm Springs (1947) and Pierre Koenig's Case Study House #22 in the Hollywood Hills (1960), transcend mere documentation of steel and glass. They reveal the essence of the architects' visions and capture the spirit of the eras when the structures were conceived. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Newer Orleans—A Shared Space
Washington, D.C.
Through July 30, 2006
In response to the need to rebuild New Orleans, the Netherlands Architecture Institute (NAI) and the Tulane School of Architecture, together with the magazine *Artforum*, invited six architecture firms from the Netherlands and the United States to reenvision shared spaces and symbols for the city. Their proposals consider a future for the city in which architecture serves to create a new sense of social commitment, political involvement, and engagement with the landscape. The Dutch firms are MVRDV, UN Studio, and West 8; Morphosis, Hargreaves Associates, and Huff + Gooden Architects represent the U.S. This exhibition has been curated by NAI. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Alvaro Siza/Architect: Drawings, Models, Photographs
Santa Monica, Calif.
Through August 19, 2006
The first museum survey in the United States to explore the distinguished 50-year career of preeminent Portuguese architect and Pritzker Prize–winner Alvaro Joaquim de Meio Siza Vieira. The exhibition's drawings, models, and photographs will illustrate the attention to spatial relationships, sensitivity to material and texture, and use of light as an expressive and active element that transforms Siza's buildings into remarkable embodiments of grace and beauty. Awarded the highest honors in his profession, Siza teaches at the Oporto School of Architecture in Portugal. At the Santa Monica Museum of Art. Call 310/586-6488 or visit www.smmoa.org.

From Wood to Architecture: Recent Designs from Finland
New York City
Through August 25, 2006
This exhibition takes a fresh look at the possibilities offered by the oldest of building materials: wood. Organized by the Museum of Finnish Architecture, the exhibition explores the current resurgence of wood as a building material. The show presents 17 recently constructed buildings in Finland, ranging from cultural centers to summer cottages to churches. The architects include established, internationally known figures such as Kristian Gullichsen, Mikko Heikkinen, and Markku Komonen, as well as a new generation of young designers, including

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Anssi Lassila and Ville Hara. At Scandinavia House: The Nordic Center in America. For more information, call 212/879-9779 or visit www.scandinaviahouse.org.

Best of Friends: Buckminster Fuller and Isamu Noguchi
Long Island City, N.Y.
Through October 15, 2006
The relationship between Noguchi and visionary designer and inventor Buckminster Fuller are illuminated in this special exhibition, which includes models, sculptures, drawings, photographs, film footage, and letters. At the Noguchi Museum. Call 718-204-7088 or visit www.noguchi.org.

Seattle Architecture Foundation Tours
Seattle
Through October 28, 2006
Seattle Architecture Foundation connects people to architecture through popular guided walking tours, exhibitions, youth programs, and public forums—programs that inspire participants to engage in shaping their community. For more information, visit www.seattlearchitecture.org.

Lectures, Conferences, and Symposia

ENIE 2006: The 11th National Electrical Installation Conference and Exhibition
São Paulo, Brazil
June 6–8, 2006
ENIE is the biggest meeting point for companies and professionals of electrical installation, equipment, and building and industrial electric systems. Some themes that will be discussed are new concepts, techniques and products for industrial and building electrical installations, protection against lightning and over-voltages, and new constructive processes. It will be an excellent opportunity to acquire information and to learn about new projects in this area. At the Blue Building, Expo Center Norte. For more information, e-mail enie2006@arandanet.com.br or visit www.arandanet.com.br/evento_enie2006/enie_ingles/enie06_presentation.htm.

Eric R. Multhauf Lunchtime Lectures
Chicago
June 7, 14, 21, 28, 2006
Free lectures include Lyman Shepard, *Frank Lloyd Wright Now: The Challenges of Modernism*; Joseph Schwieterman, *The Politics of Place: A History of Zoning in Chicago*; Julia and Charlie San Fratello, *Turning Alta Vista Inside Out: Victorian and Modern Desires in a Landmark Row House*; Mary B. Brush, *French and American Heritage and Preservation Values: What Can We Learn from Each Other?* At the ArchiCenter. Call 312-922-3432 or visit www.architecture.org.

Exit Strategy: The 4th Annual Art & Structure Exhibit for Common Ground
New York City
June 8, 2006
A reception and exhibition hosted by Joan and Marc Sherman to help solve homelessness through an innovative program. Calvin Tsao, of Tsao McKown, collaborates with war artist Steve Mumford at this year's exhibition dedicated to raising money for Hope for New Veterans, which helps identify and assist returning veterans at risk of becoming homeless. The exhibition comprises installations that use spatial relationships to communicate emergence and re-assimilation that veterans go through upon returning to civilian life. At 135 Greene Street. Call 212/471-0886 or visit www.commonground.org.

World Party & 06 AIA/L.A. Design Awards Program
Los Angeles
June 8, 2006
The official welcome party of the 2006 AIA Convenction. At El Pueblo de Los Angeles, Olvera Plaza. For more information, call 213/639-0777 or visit www.aiaconvection.com.

The AIA 2006 National Convention and Design Exposition
Los Angeles
June 8–10, 2006
The premier event for architects and building-industry professionals, with over 150 continuing education programs, 100 professional tours, 75 special events, and 800 leading-edge companies exhibiting their products and services. At the Los Angeles Convention Center. Call 213/639-0777 or visit www.aialosangeles.org.

Residential Contractors
Cleveland
June 8–9, 2006
This conference is open to all trade area partners for the homebuilder industry, specifically residential contractors and electricians. Product updates for high-quality and energy-efficient lighting, electrical distribution, structured wiring, security

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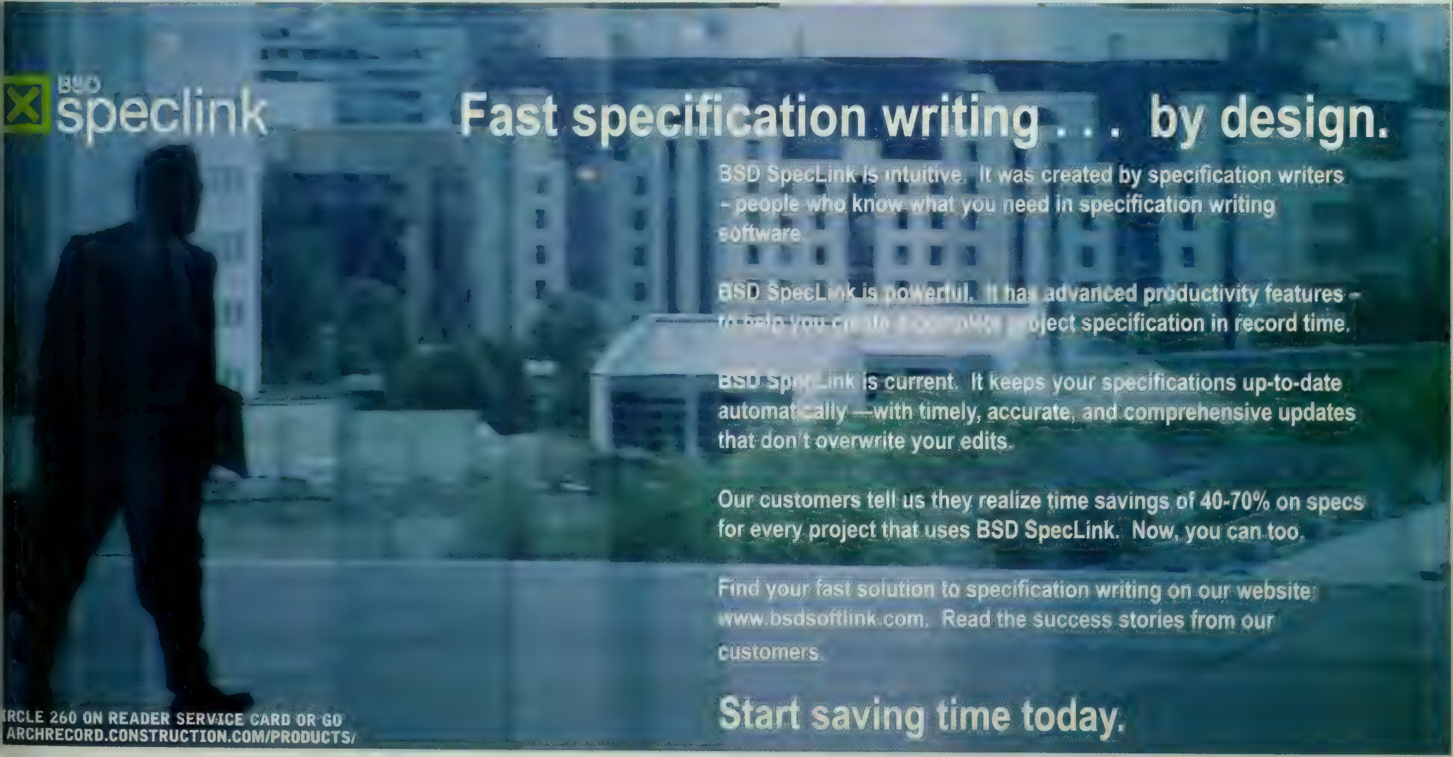

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Who Says What Architecture Is?
Los Angeles
June 9, 2006
A debate on the various definitions and ramifications of today's architecture will use the AIA/L.A. Design Awards as background. Moderated by architect and SCI-Arc director Eric Owen Moss, FAIA, the panel comprises architect Thom Mayne, FAIA; architect Wolf Prix; architect and AIA/L.A. President William Fain, FAIA; and architecture writer and radio host/producer Frances Anderton. At the Southern California Institute of Architecture (SCI-Arc). Call 213/639-0777 or visit www.aialosangeles.org.

Dining by Design—LA Style
Los Angeles
June 9–10, 2006
AIA/L.A. has hand-picked some of L.A.'s hottest restaurants to offer you an unforgettable dining experience. Consider joining the architect/designer at one of our Dining by Design events during your convention visit. 13 restaurants are featured as part of this program. For a full list of participating restaurants, visit www.aialosangeles.org.

Symposium: Prefabricated Houses—Good and Green Design
Washington, D.C.
June 13, 2006
Significant efforts are under way to improve the reputation of prefabricated, or modular, housing. A growing number of architectural firms now combine the economic and construction efficiencies of factory-built homes with the benefits of customized, green designs. The result is sophisticated architecture and interior design that can be offered at reasonable prices and that incorporates many environmentally friendly features. Michelle Kaufmann, Joseph Tanney, AIA, and Michael Sylvester will discuss this growing housing trend. This symposium complements the exhibition *The Green House* which will be open before and after the program. At the National Building Museum. For information, call 202/272-2448 or visit www.nbm.org.

London Architecture Biennale
London
June 17–25, 2006
Following the overwhelming response to the inaugural London Architecture Biennale in 2004, the celebration returns in 2006 on a vastly increased scale—covering a wider geographical area, involving even more prestigious names and organizations, and linking with national events, including Architecture Week, Cycle Week, and Sustainability Week. The London Architecture Biennale will once again center around the Smithfield area but will extend its reach to include a route connecting King's Cross and Bankside. Talks, exhibitions, walks, film screenings, parties, debates, artworks, Thames events, and an awards ceremony will reflect the Biennale's aim to celebrate diverse creative talent in London and to bring that talent to bear on real issues that confront the city today. The Biennale will run alongside the 10th Architecture Week. Visit www.londonbiennale.org.uk http://www.londonbiennale.org.uk/ or www.architecture-week.org.uk for details of more than 350 events around the country.

The 2nd International Summer School: Designation—Tradition and Creativity
North Cyprus
June 19–30, 2006
The summer school scheduled for this year at the Faculty of Architecture, Eastern Mediterranean University, with the topic of "designation," aims to gather interdisciplinary ideas and works focusing on tradition and creativity. Call 90 392 630-2252 or visit www.emu.edu.tr.

Architecture Camp
Pittsburgh
June 19–August 18, 2006
Architecture Explorations, a series of one-week and two-week camps dedicated to architectural design, construction, form, and function, and presented in collaboration with Carnegie Mellon University's School of Architecture, are available for children ages six to 13, as well as high school students. The architecture camps will be held at Carnegie Mellon University's architecture studios and in Carnegie Museum of Art's Heinz Architectural Center. Call 412/622-3131 or visit www.cmoa.org.

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Dates & Events

Lecture: Pinwheel on the Prairie: Frank Lloyd Wright's Price Tower
Washington, D.C.
June 19, 2006

Frank Lloyd Wright designed several skyscrapers, but the Price Tower in Bartlesville, Oklahoma, is the only one ever constructed. The 19-story, 57,000-square-foot high-rise, incorporating office, retail, and residential space, served as the corporate headquarters for the H.C. Price Company. The iconic building was designed to resemble a tree in form and function, with branchlike, cantilevered floors that "broke the box" of conventional construction. Anthony Alofsin—professor of art and art history at the University of Texas at Austin, guest-curator of the exhibition *Prairie Skyscraper: Frank Lloyd Wright's Price Tower*, and editor of the accompanying catalog of the same name—will discuss Wright's use of "rotational geometry" as the key to understanding the form of the building. At the National Building Museum. For more information, call 202/272-2448 or visit www.nbm.org.

NCARB 2006 Annual Meeting and Conference
Cincinnati
June 21–24, 2006

The National Council of Architectural Registration Boards (NCARB) Annual Meeting offers informative workshops, business sessions, and networking opportunities. Richard L. Rundell, AIA, NCARB, LEED, of Building Solutions Division of Autodesk, in Boston, will be the keynote speaker. The 87th Annual Meeting and Conference will be at the Hilton Netherland Plaza. For more information, call 202/783-6500 or visit www.ncarb.org.

Re-floatin' NOLA: A Better Future for New Orleans
Washington, D.C.
June 27, 2006

For years, New Orleans, Louisiana ("NOLA"), has struggled to maintain its day-to-day existence in the face of outdated infrastructure and persistent social and economic stratification. Hurricane Katrina and the subsequent levee collapse have exacerbated this situation and caused civic leaders across the country to reexamine the often unstable and fragile foundations in their own communities. University of Virginia School of Architecture professor William R. Morrish will explore NOLA's historic roots and sift through the debris of renewal efforts to identify critical pivot points and initiatives that can be used not only to rebuild damaged areas, but also to "re-float" the idea of New Orleans as a culturally rich, vital city. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Design and Health: 5th World Congress and Exhibition
Glasgow
June 27–July 1, 2006

An international forum for continuous dialogue between researchers and practitioners. Presentations focus on the practical importance of workplace design qualities that reduce stress and promote health. At Glasgow Hilton Hotel. Call 46 8 689-9355 or visit http://www.hilton.com/.

Design-Build for Federal Facilities: Command and Control in Project Delivery
Arlington, VA
June 28–30, 2006

Join DBIA for its first conference focused on the project delivery needs of the federal government. Government agencies will learn how to maximize the success of design-build projects through discussion of case studies, and learn about various procurement methodologies, contracting approaches, and best practices. Practitioners will learn

about the many opportunities available in the public sector, as well as what agencies are looking for when hiring design-build teams. Call 202/682-0110 or visit www.designbuildfederal.com.

International Summer Academy
Southwest France
June–September 2006
A total of 25 workshops addressing topics from the fields of product design, exhibition design, jewelry design, graphic work, architecture, and art will be offered at the Domaine de Boisbuchet, a country estate in Southwest France. The courses will be headed by renowned designers, architects, and artists, such as Humberto and Fernando Campana, Alexander Brodsky, Dinie Besems, Stephen Burkes, Bruckner + Bruckner Architects, and Ico Migliore. For further information, call 49 7621 702 35 74 or visit www.boisbuchet.org or www.design-museum.de.

Washington: Symbol and City
Washington, D.C.
Long-term
This exhibition reveals how the built environment of the national capital reflects the complex relationship between Washington's role as a national symbol and seat of government and Washington's day-to-day life as an evolving municipality. At the National Building Museum. For more information, call 202/272-2448 or visit www.nbm.org.

Competitions

New Orleans Reconstruction Exhibit Invitation
Deadline: June 10, 2006
All student design studios working on projects for the reconstruction of New Orleans are invited to enter this competition to exhibit their work. For more information, visit the Gulf Recovery page at http://www.acsa-arch.org/.

Home of the Year Awards
Deadline: June 26, 2006
Categories include single family, multifamily, renovations/additions, emergency shelter, and individual apartments/condominiums. For further information, visit www.architecture.com.

Unbuilt Architecture
Deadline: June 26, 2006
Architects, architectural educators, and architecture students throughout the world are invited to submit real or theoretical projects. Visit www.architects.org/awards.

The Vetter Inspired Project (VIP) Call for Entries
Deadline: July 1, 2006
A project may be entered by any project team member—architect, builder, remodeler, designer, or general contractor—but it must feature Vetter windows and/or patio doors. For more information, call 715/693-8407 or visit www.vetterwindows.com.

Honor Awards for Design Excellence
Deadline: July 6, 2006
The annual Boston Society of Architects (BSA) honor awards program invites submissions of projects of any type anywhere in the world designed by Massachusetts architects, and also invites architects throughout the world to submit projects built in Massachusetts. For more information, visit www.architects.org/awards.

The Craftsman's Challenge 2006: The Search for the Golden Touch
Deadline: July 15, 2006
Veneer Tech's competition aims to recognize excellence in woodwork and architectural woodwork that features natural edgebanding applications. Awards will be officially announced in August at the International Woodworking Fair (IWF) in Atlanta. Call 800/593-5601 or visit www.veneertech.com.

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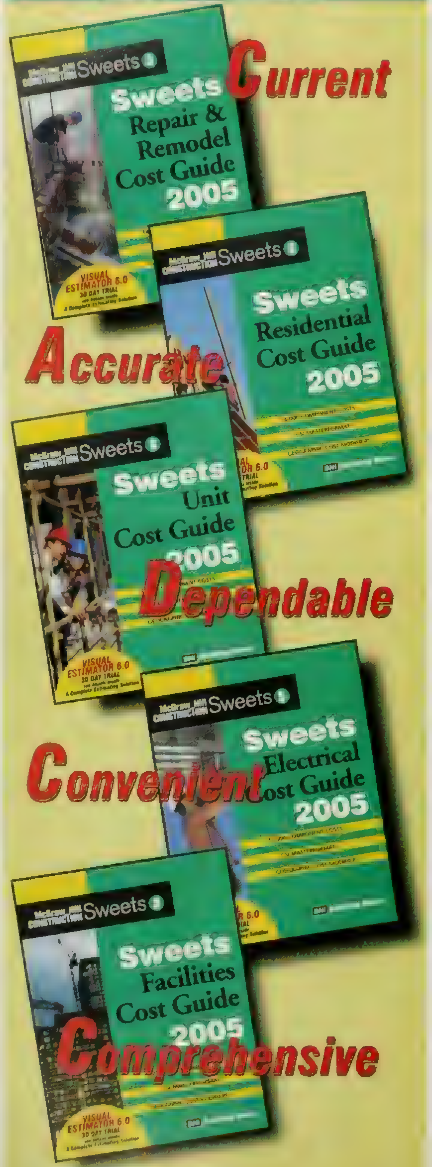
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Dates & Events

A Bridge Museum

Deadline July 17, 2006

This architectural contest promoted by Arquitectum seeks design entries for a new bridge to replace the Academy Bridge in Venice, Italy. The bridge is intended to become a city museum as well as a connecting bridge and entry to the Rio Alto. Visit www.arquitectum.com.

Juried Photo Exhibits at Build Boston

Deadline: August 1, 2006

All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. For more information, visit www.architects.org/awards.

Ceiling Installation Excellence Awards

Deadline: August 30, 2006

Open to all installation professionals who have completed a project where the ceiling system comprises at least 50 percent Chicago Metallic products, the contest is established to honor exceptional craftsmanship. To enter, projects must have been completed between January 2002 and July 2006. Winners will be announced in January 2007. For more information, call 800/323-7164 or visit www.chicagometallic.com.

Imagining Penn Center: A National Student Design Competition to Plan New Life for Philadelphia's Central Civic Space

Deadline: September 15, 2006

Penn Center is one of Center City Philadelphia's important spaces, housing Suburban Station, office towers, retail, and public plazas. Originally conceived by the late Edmund N. Bacon, Philadelphia's renowned former planning director, Penn Center changed the face of Philadelphia when it was built in the 1960s as one of the largest and most ambitious downtown redevelopments of its time. Today, Penn Center is vastly underutilized by the public, yet it holds great potential for revitalization. The Ed Bacon Foundation challenges students to imagine the site's potential and to generate ideas for restoring this important space as a modern Philadelphia epicenter and icon. For more information, visit www.edbacon.org/penncenter.

E-mail event and competition information two months before event or submission deadline to elisabeth_broome@mcgraw-hill.com.

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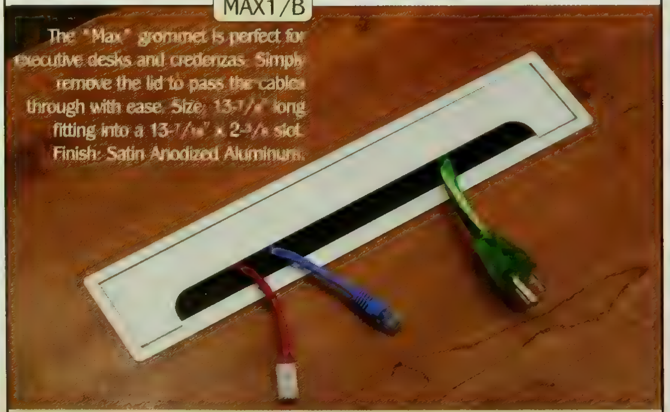

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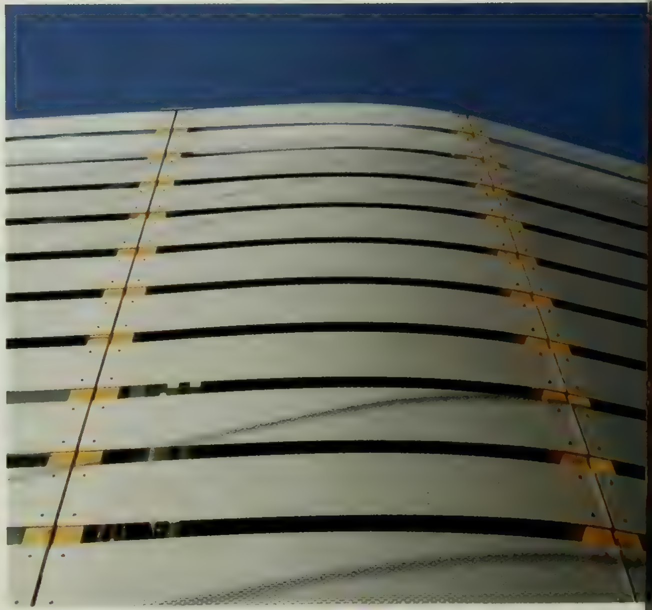

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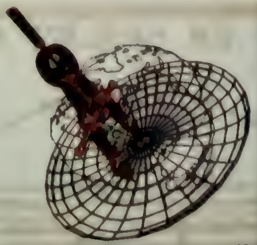

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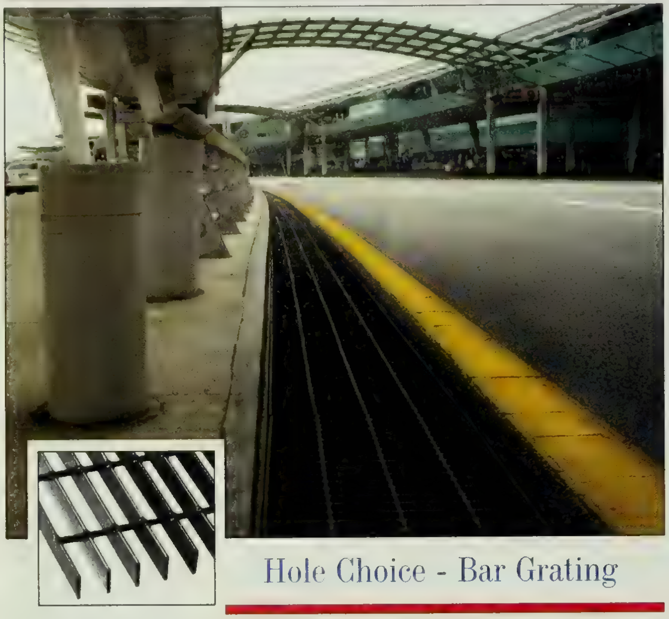

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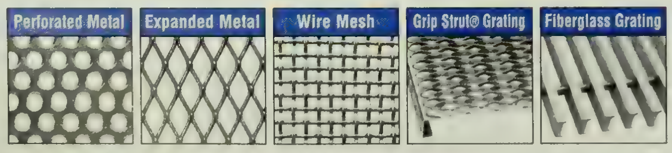

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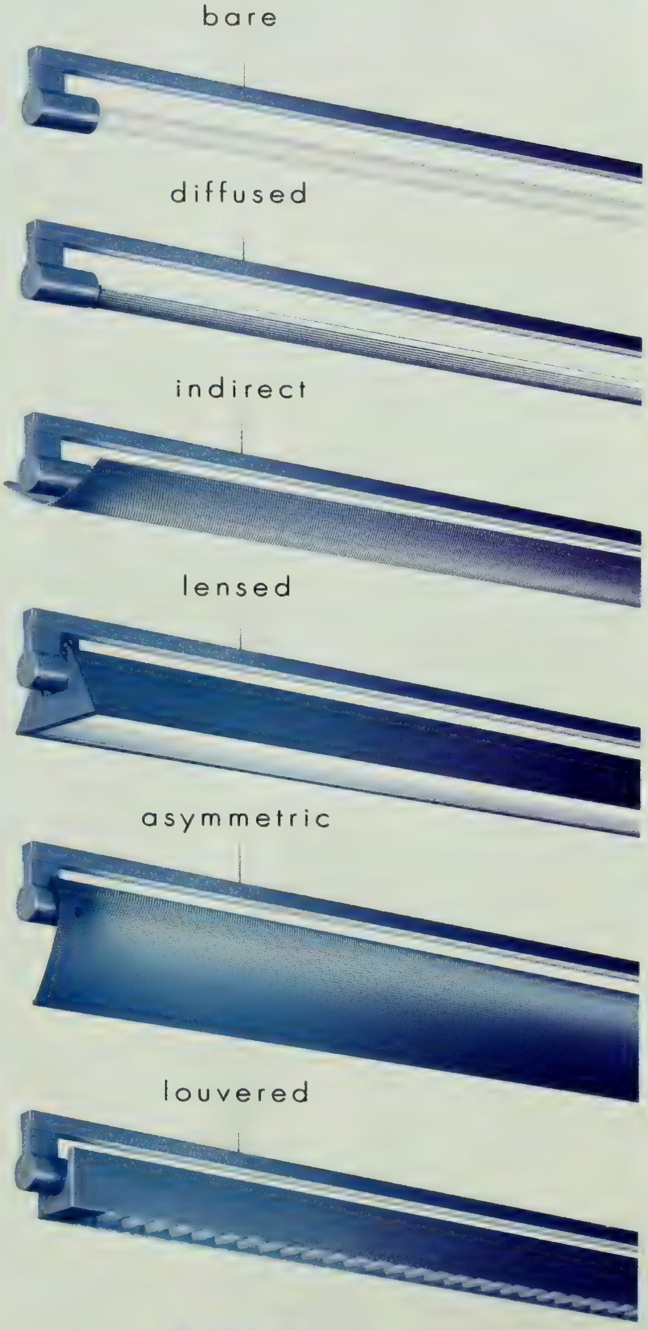

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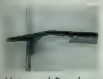

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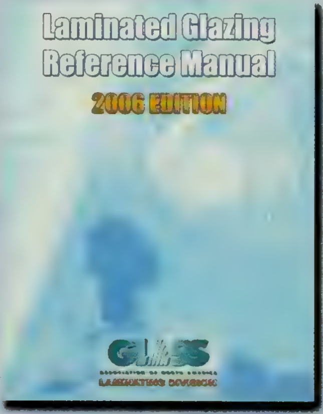

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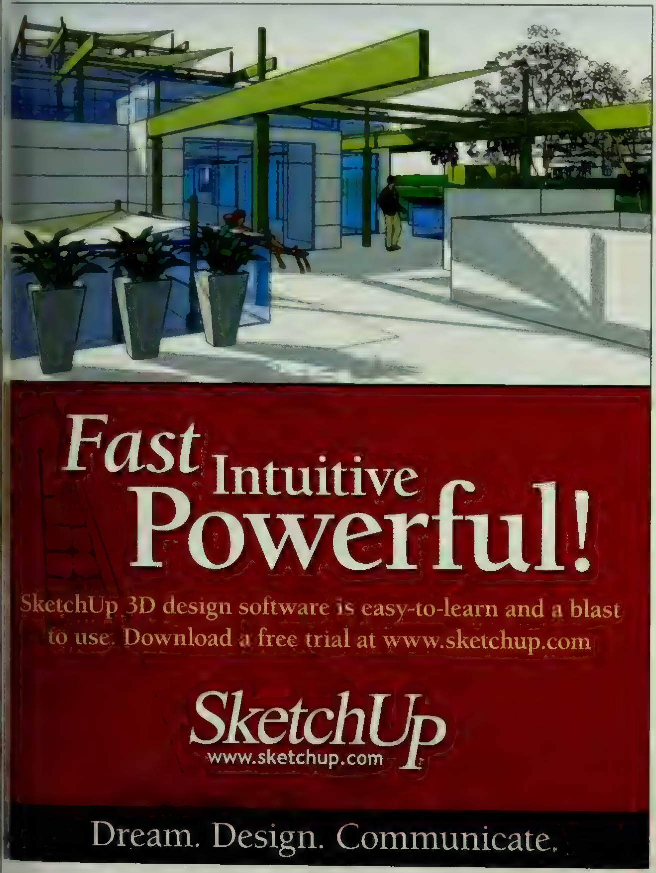

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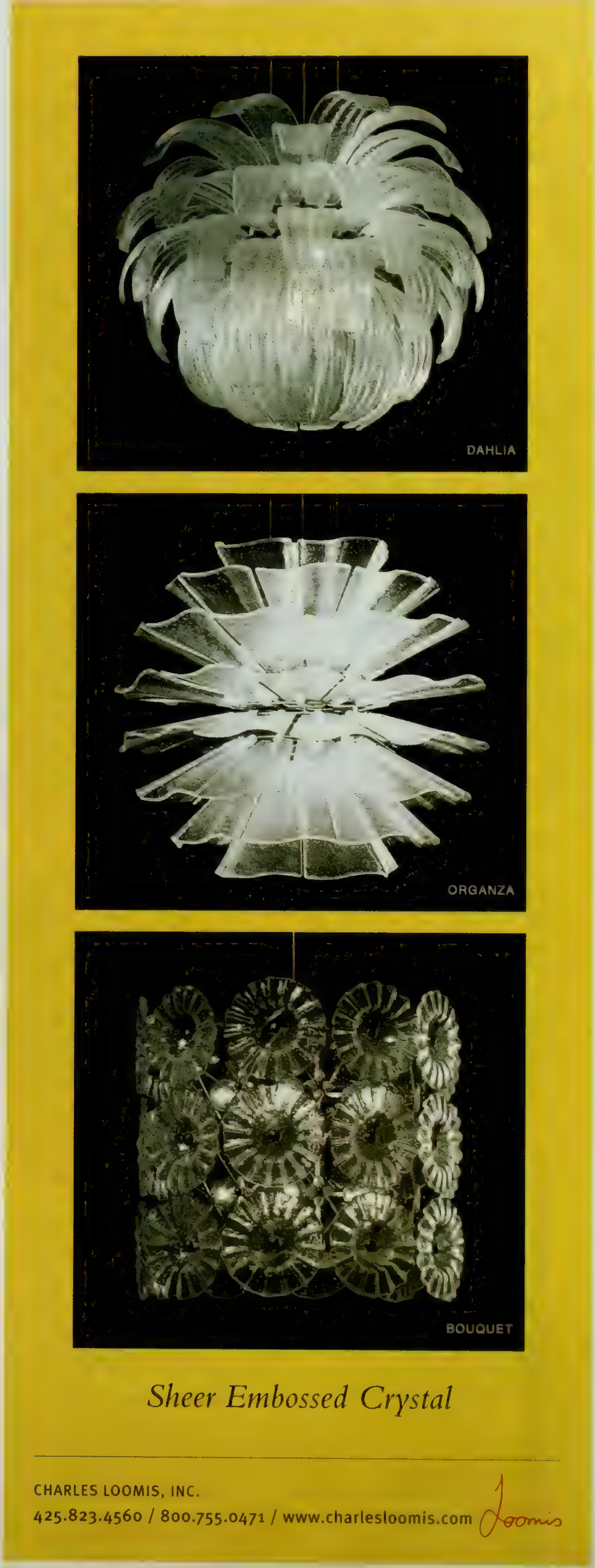

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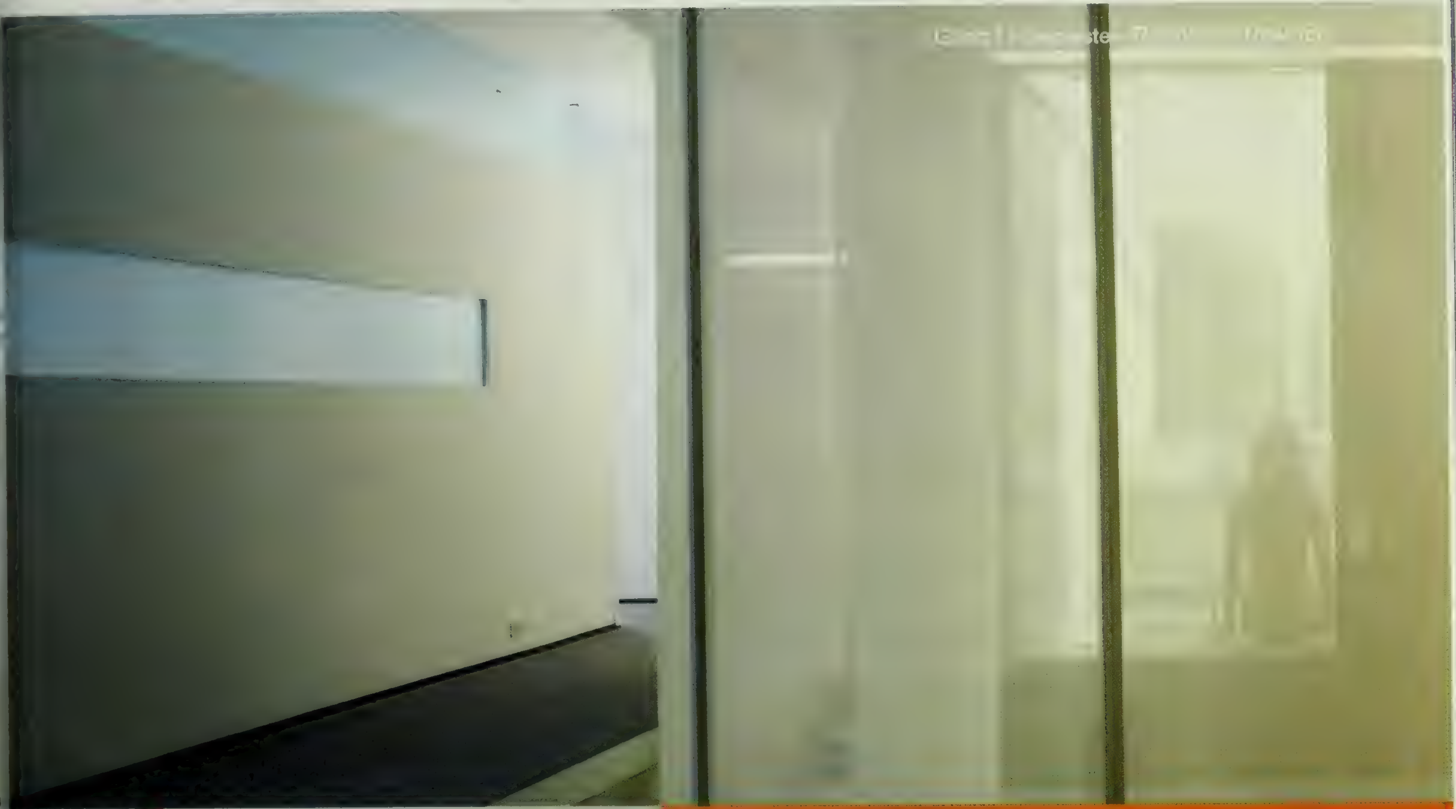

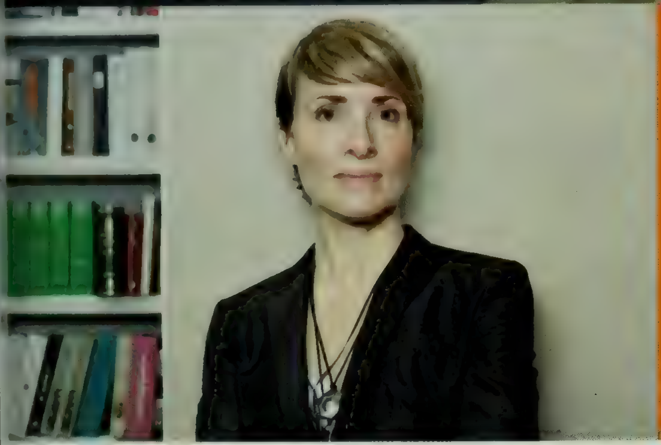

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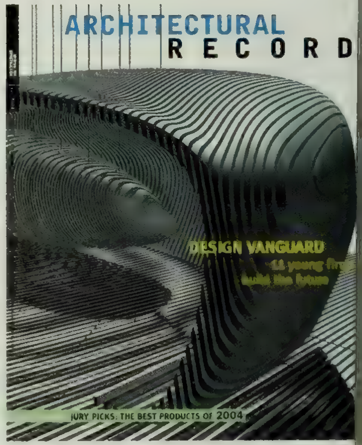

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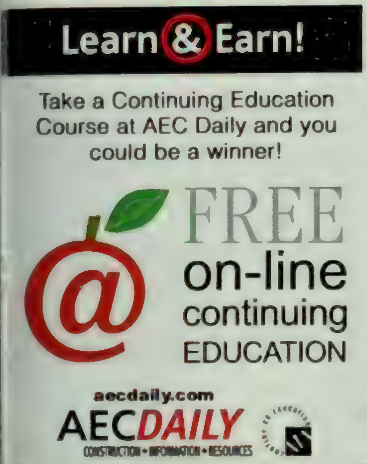
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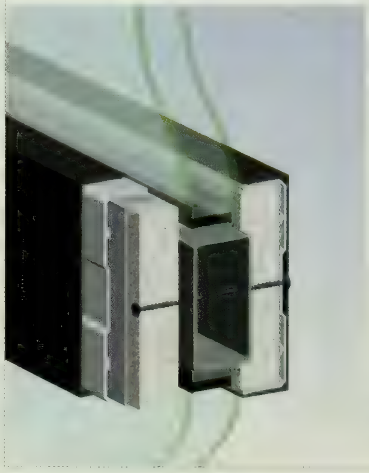

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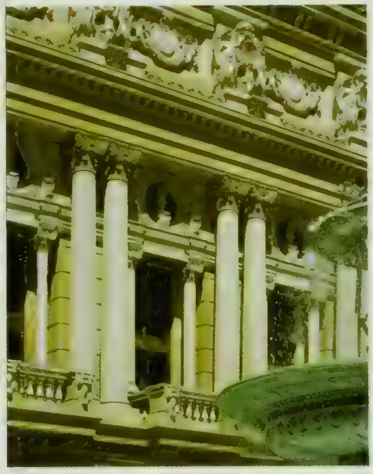

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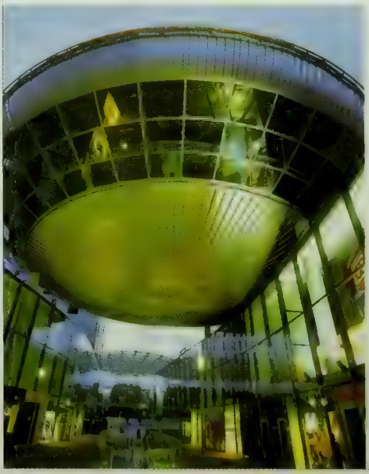

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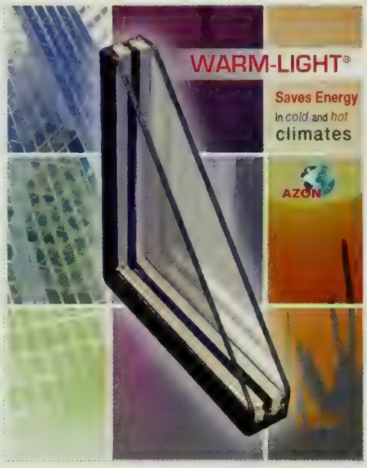

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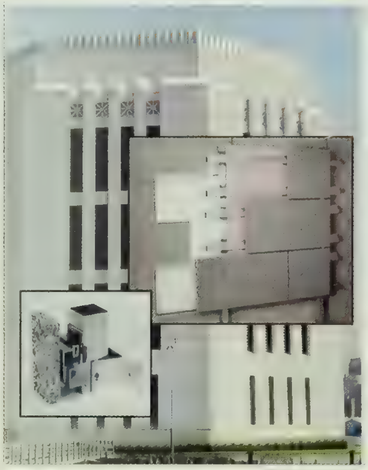

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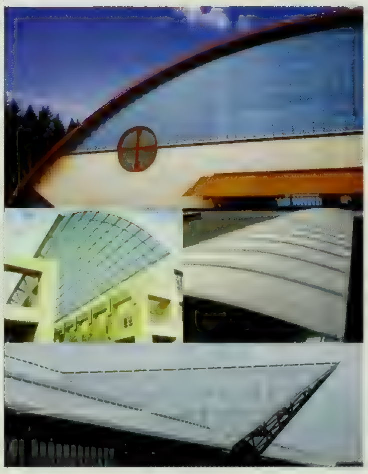

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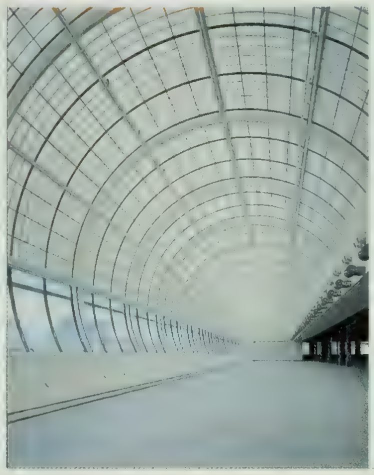

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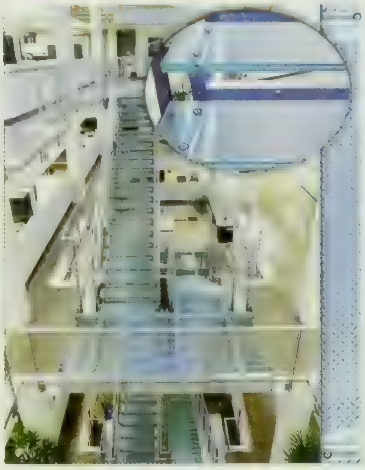

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Fire-Rated Glazing Solutions

SAFTI *FIRST*

SAFTI *FIRST* Fire Rated Glazing Solutions has been manufacturing fire-rated glass and framing for over 20 years. SAFTI *FIRST*'s SuperLite™ product line includes fire-rated glazings for every application, rated from 20-min. to 3-hr. SuperLite™ can protect against noise, attack, impact, bullets, blast, hurricane and UV rays and is available in virtually any architectural make up, with enhanced energy performance. U.S. manufactured to ensure fast lead times. Call them at 888-653-3333 or visit www.safti.com for all your fire-rated glazing solutions.

888-653-3333
www.safti.com
AIA Booth #4436

| Circle Reader Service #183

Fire Protection Glass

Pilkington Fire Protection Glass North America

Pilkington Pyrodur™ 20-104 is new to the North American market and can be cut similar to laminated glass! This allows cases of glass to be stocked for immediate delivery, where short lead times are critical. For additional information, contact TGP at 800-426-0279 or visit the TGP website at www.fireglass.com.

800-426-0279
www.fireglass.com
AIA Booth #1537

| Circle Reader Service #181

Contemporary Designer Levers

Sargent Manufacturing Company

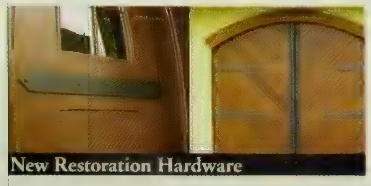
High performance hardware meets beautiful design. SARGENT® introduces Metro Elements: 22 levers in a choice of 12 finishes. Part of the Studio Collection, the levers are contemporary in design and may be used with coordinating access control devices, mortise locks, tubular locks and exit devices. SARGENT—now a single-source for superior levers and door hardware.

800-727-5477
www.studiocollection.com

| Circle Reader Service #184

Door Hardware Products

Richards-Wilcox Mfg. Co.



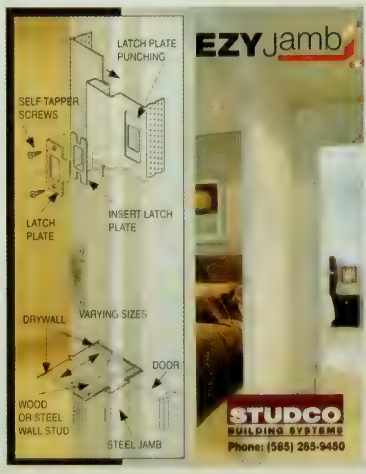
Richards-Wilcox manufactures a line of specialty door hardware products for the antique reproduction market circa 1880 through 1950. With over 25 different types of decorative hinges, hinge straps, cast iron handrail brackets, and antique flat track, and hangers, Richards-Wilcox supplies many choices for swinging, hanging, and bi-fold door hardware in traditional building or historic applications such as coach houses, garages, roundhouses, barns and stables. For more information call Richards-Wilcox or visit their web site.

800-877-8456
www.rwhardware.com
AIA Booth #326

| Circle Reader Service #182

Trimless Doorframe

Studco Building Systems



Studco's EZY-Jamb product is a split-type jamb manufactured from cold rolled steel to produce a strong and secure assembly. EZY-Jamb comes with perforated sides for flush jointing which produces a contemporary flush finish door jamb with clean lines and inconspicuous detail. The jamb comes in two sections that fit neatly together and provides adjustability in wall thickness. Not only has the installer's dream been realized, but the architect's dream has started.

585-265-9450

| Circle Reader Service #185

Hand-Crafted Bronze Hardware

Sun Valley Bronze

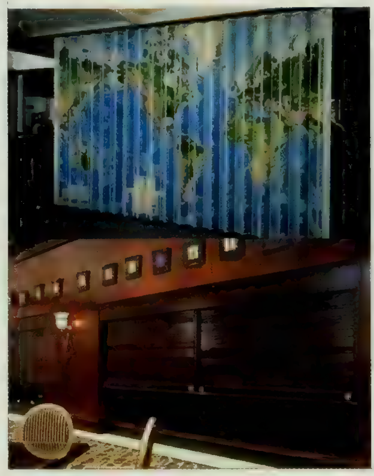
Sun Valley Bronze designs and builds exquisite, hand-crafted bronze hardware. Collection's range from traditional to contemporary including hardware for doors and windows, kitchens and bath, and a wonderful array of accents and accessories. The new Corrugated Collection was released, for the first time, in April, 2006.

866-788-3631
www.svbronze.com

| **Circle Reader Service #186**

Doors for Interior Architecture

Woodfold-Marco Mfg., Inc.



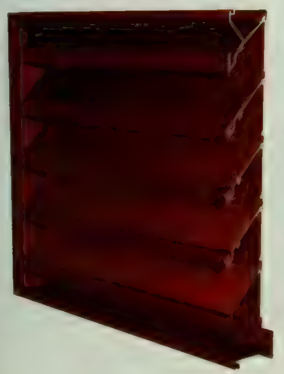
Some will say that nothing is more beautiful than wood. Woodfold-Marco would agree. Woodfold custom made accordion and roll-up doors (available in hardwood and non-hardwood finishes as well) are both functional and beautiful. Woodfold-Marco has models available for use as sight, security, and acoustic applications. Its solid hardwood roll-up doors coil conveniently overhead. And, to assure on time completion of your projects, Woodfold-Marco has the industry's best production cycle. Fax number 503-357-7185

503-357-7181
www.woodfold.com/AR
AIA Booth #2023

| **Circle Reader Service #189**

Combination Stationary & Adjustable Blade Louvers

The Airolite Company



Airolite's new combination louvers incorporate drainable stationary and adjustable blades in a single 4-in. frame (Louver Type K8504) or 6-in. frame (Louver Type K8506). Both louver types feature exposed linkage for easy field adjustment and continuous integral hinge construction enabling the louver to be made in single sections up to 120-in. wide to achieve maximum mullion spacing. For more information, visit Airolite on the Web, or contact them at 27855 State Road Route 7, Marietta, OH 45750.

740-373-7676
www.airolite.com
AIA Booth #3629

| **Circle Reader Service #187**

Resilient Athletic Flooring

Abacus Sports Installations

Abacus Sports Installations is proud to offer PADENPOR. PADENPOR resilient flooring is designed for multipurpose use, including all sports activities, dances, meetings, roller blading, etc. PADENPOR is a "dual durometer" multipurpose floor. Two products (rubber basemat and urethane) are combined to introduce two different hardnesses to the floor. The rubber underlayment (LEED and Green certified) is soft, offering resilience/ergonomics/safety. The urethanes are hard, offering not only performance (ball rebound/playability) but also durability.

800-821-4557
www.abacussports.com

| **Circle Reader Service #190**

Insulating Glass with Integral Blinds

Unicel Architectural Corp.

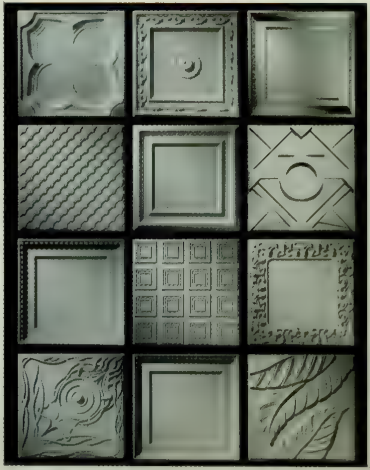
Unicel Architectural is the proud manufacturer of this unique patented glazing product: Vision Control®. With this custom unit, enjoy total control of light, privacy and sound without worrying about cleaning. Unlike ordinary blinds, Unicel's pivoting blinds made of extruded aluminum are mounted inside a hermetically sealed glass unit offering you 100% dust-free and germ-free louvered glazing, without cords or strings! Blinds are operated using a hand crank, thumbwheel, motorized switch or computer. Ideally suited in interior partitions, doors, windows, curtain walls and skylights.

800-668-1580
www.visioncontrol.qc.ca

| **Circle Reader Service #188**

Ornamental Plaster Ceiling Tiles

Above View Mfg., By Tiles, Inc.



Above View ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1,300 custom colors and faux finishes available upon request.

414-744-7118
www.aboveview.com

| **Circle Reader Service #191**

Free-Pattern Rotating Carpet Tiles

Binvetec

Free Pattern Rotating Carpet Tiles™ with TractionBac™ are a unique concept in modular floor covering that offers design and flexibility with only one tile design. Binvetec offers floor design consultation services utilizing this revolutionary carpet tile product.

877-4-Binvetec
www.Binvetec.com

| Circle Reader Service #192

Decorative Wall Panels

Crane Composites, Inc. (formerly Kemlite Company, Inc.)

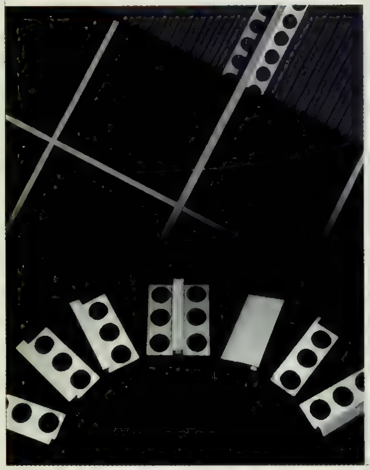
The look of tile, The ease of FRP. The frpDesign Solutions Matrex panel has a high gloss decorative surface in solid and granite colors. Matrex fiberglass reinforced plastic (frp) panels are available with 4-in. by 4-in. sealed simulated grout lines or without grout lines and are easy to install and maintain. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com
AIA Booth #2814

| Circle Reader Service #195

Metal Flooring Transitions

Ceramic Tool Co., Inc.



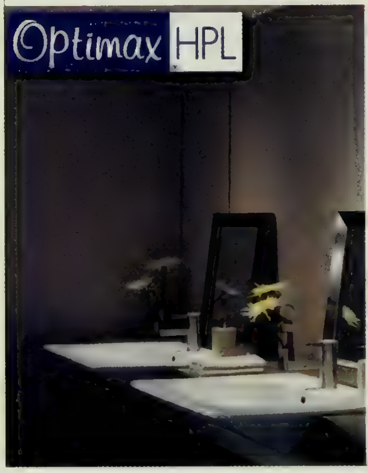
Ceramic Tool has been serving the construction industry for more than 20 years by providing aluminum floor trims, carpet transitions and premolded control joints for ceramic, stone, marble and hardwood floors. Their products present a tremendous advantage to flooring contractors and property owners. These products are used to increase impact resistance at heavy traffic areas and protect adjoining flooring materials. They provide performance and durability with simple installation; CTC trims save time and money and improve the overall look of any floor.

www.ceramictool.com

| Circle Reader Service #193

Sanitary Wall & Ceiling Panels

Crane Composites, Inc. (formerly Kemlite Company, Inc.)



With over 500 patterns available, Optimax HPL is the premier frpDesign Solutions panel. It is a decorative wall panel made of a high pressure laminate (hpl) surface bonded to a fiberglass reinforced plastic (frp) substrate. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com
AIA Booth #2814

| Circle Reader Service #196

Decorative Wall Panels

Crane Composites, Inc. (formerly Kemlite Company, Inc.)

With a "select" offering of 35 of the most popular patterns and woodgrains, the frpSelect panel uses a revolutionary industry process to combine a decorative pattern or woodgrain surface with a Kemlite frp substrate. This product line will set the standard for decorative frp panels of the future. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com
AIA Booth #2814

| Circle Reader Service #194

Special Wall Surfaces

Crane Composites, Inc. (formerly Kemlite Company, Inc.)

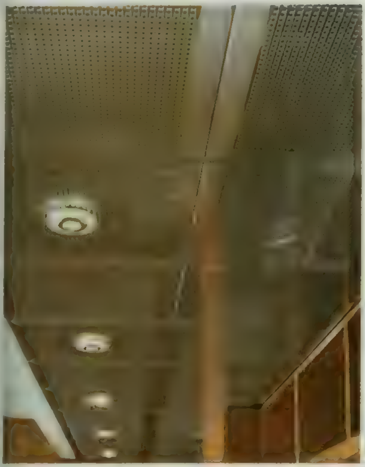
Decorative, lightly textured FRP. With a variety of finishes in pastel and earth tone colors, the Varietex panel is an economical decorative panel. Upgrade a standard frp panel application with a sandstone, linen or cedar finish in nine different colors. As with all frp panels, Varietex is mold and mildew free. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com
AIA Booth #2814

| Circle Reader Service #197

Decorative Metal Ceilings

Gage Corporation, Inc.



The Gage Corporation International has been designing and manufacturing decorative metal ceilings since 1989. Gage ceilings feature more than 50% post-consumer recycled material and are visually rich, functional, and versatile as a design medium. Custom collaboration is encouraged. Email gage@centurytel.net

800-786-4243
www.gageceilings.com
HD Booth #3809

| Circle Reader Service #198

Porcelain Wall Tiles

Viva Ceramica

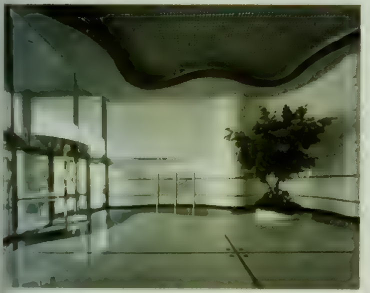
Even though Viva Cermica had introduced Central Station at Cersaie 2005 as a color through porcelain floor tile series, it was easy to convert it to a wall covering. It's just so adaptable with its suggestions of metal and its decorative squares and circles in crackle glaze. And both the big diameter and the 30cm square are ideal for minimalist mosaic decors in bathrooms or on walls in public areas.

www.cerviva.it

| Circle Reader Service #351

Crystallized Glass Ceramic Architectural Panels

Technical Glass Products



Neopariés® and Neopariés® LT are lighter yet stronger than granite. Commonly used for cladding interior and exterior walls, flooring, and counter or tabletops, they are virtually impermeable and not subject to freeze-thaw damage, penetration by rust, mortar or other staining substances. Contact Technical Glass Products at 888-397-3473 or www.tgpamerica.com.

888-397-3473
www.tgpamerica.com

| Circle Reader Service #199

Architectural Sheetmetal Products

CopperCraft

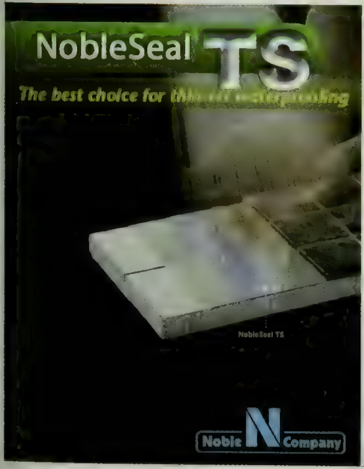
CopperCraft manufactures a complete line of high-quality architectural sheetmetal products including ornamental dormers, roof vents, roof drainage products, conductor heads, steeples, cupolas, and spires, as well as items which are custom built to your specifications. Design, engineering, testing, and fabrication methods that meet stringent structural and performance standards make the difference. You get unsurpassed quality, delivery, and custom service including a nationwide network of representatives.

800-486-2723
www.coppercraft.com

| Circle Reader Service #352

Thin-Set Waterproofing

The Noble Company



NobleSeal® TS is a thin, sheet membrane for waterproofing and crack isolation of thin-set ceramic or stone tile. TS can be bonded to a vertical or horizontal substrate, and tile can be bonded to TS. It's ideal for shower floors, walls and drying areas. TS is recommended for wheelchair accessible showers and other applications where a full mortar bed is not desired. Contact Noble Company (800-878-5788) or visit www.noblecompany.com. Email sales@noblecompany.com

800-878-5788
www.noblecompany.com
AIA Booth #4425

| Circle Reader Service #350

Canopies & Walkway Covers

CPI Daylighting, Inc.

CPI provides single source responsibility for the entire structure from the ground up. CPI's new Clearspan design for translucent canopies and walkway covers eliminates the horizontal cross beam and offers an economical, functional design with unequaled aesthetic appeal. Clearspan provides an excellent shelter and gives an open-air feeling by allowing natural daylight through to light up the area below.

800-759-6985
www.cpidaylighting.com

| Circle Reader Service #353

Post & Rack Mailbox System

Custom Home [illegible]

This flexible mailbox system is an attractive solution for centralized mail delivery. By adding shelves, and increasing the distance between posts, the system can accommodate an increasing number of mailboxes. Imperial mailboxes and posts are cast aluminum (not sheet metal) that will never rust or rot. Many different mailbox/post styles and configurations are available.

800-265-0041
www.mailboxes.info

| **Circle Reader Service #354**

Art Presentation

Walker Display Incorporated

Life's all about change and so is Walker Display when it comes to art presentation. The Walker system frees you to explore all your options. No-More-Holes frees you to rearrange your artwork with ease and speed. Embrace change!

800-234-7614
www.walkerdisplay.com

| **Circle Reader Service #357**

Canopies & Walkway Covers

Mapes Industries

Mapes Industries manufactures a complete line of hanger rod canopies and walkway covers. These pre-engineered canopies incorporate roll formed and extruded roof decking, flat or corrugated, with projections up to 12-ft. With multiple fascia profiles, the canopies are a cost effective alternative to jobsite built designs. Custom colors are also available. Specially designed brackets allow these canopies to be attached to any wall surface including EIFS, metal buildings and CMU. For more information, please call 800-228-2391 or visit www.mapes.com.

800-228-2391
www.mapes.com

| **Circle Reader Service #355**

Central Vacuum System

Beam Industries

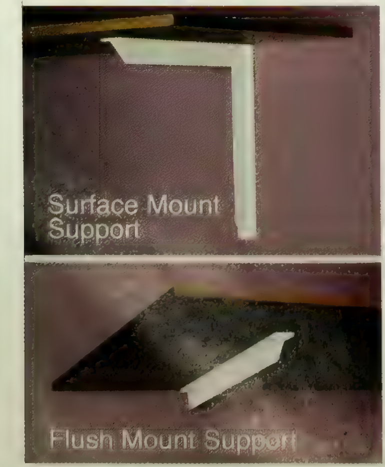
The Beam Serenity® Plus Central Vacuum System and Beam Advocate™ Power Team provide "Cleaner, healthier living. Built in." The Beam Serenity Plus Central Vacuum System improves indoor air quality. It's the only central vacuum system that is clinically proven to relieve allergies. And it is rated by builders as the highest quality central vacuum system available.

www.beamvac.com

| **Circle Reader Service #358**

Counter Support Brackets

Rangine Corporation / Rakks



Rangine Corporation's counter support brackets provide an easy-to-install alternative to full-height laminated panels. Available in a range of sizes to support counters up to 30-in.-deep, brackets install easily into studs or blocking and can support loads up to 450-lb. Less expensive than laminated supports, they increase open space while improving handicapped access and ergonomics. Brackets can be ordered in either surface or flush mounted configurations to provide heavy-duty unobtrusive support. Manufactured of extruded structural aluminum.

508-376-4545
www.rakks.com

| **Circle Reader Service #356**

Clean-Lined Outdoor Furniture

Modern Outdoor

Modern Outdoor offers three complete lines of high-style, clean-lined environmentally conscious outdoor furniture. The Modern Outdoor Collections are commercial grade products designed for use in all manner of public spaces—restaurants, hospitality, parks, resorts, hotels—yet have an aesthetic that is perfect for a residential client's backyard setting. Their products now come in ipe or polyboard, stainless steel or powder-coated steel, and a natural composite material. They offer net pricing to qualified members of the trade. View the entire collection online.

818-785-0171
www.modernoutdoor.com

| **Circle Reader Service #359**

Rotating File Cabinets

Richards-Wilcox Mfg. Co.

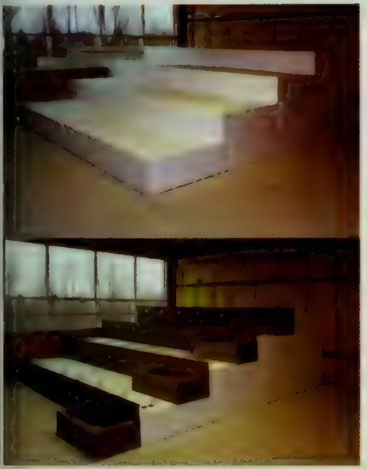
Aurora Products introduces the 2-Tier Times-2, a new twist on storage and filing. At only 29-1/2-in. high, the 2-Tier Times-2 is a perfect desk companion, providing dual-sided filing in a locking cabinet that rotates. This Times-2 holds as much as one 4-drawer 30-in. lateral file in a foot print that's just 36-in. wide by 25-in. deep. A variety of accessories accommodates all types of multimedia storage and filing. For more information call or visit them on the Web.

800-877-8456
www.timestwo.com
AIA Booth #3446

| Circle Reader Service #360

Riser System for Stadium Seating

Stadium Savers, LTD



Stadium Savers provides an economical and proven alternative for achieving stadium seating tiers in an existing or new building. Stacked Geofoam blocks and Stadium Savers metal risers provide stable formwork for concrete seating platforms. The system is lightweight, easy to install, and is custom cut at the factory to suit straight, curved, or segmented seating layouts.

616-785-5598
www.stadiumsavers.com

| Circle Reader Service #361

Italian Terra Cotta

Tuscan Imports, Inc.

Tuscan Imports, Inc. is an importer of the finest hand made Italian terra cotta planters, urns, fountains and statuary suitable for residential or commercial applications. Exceptional detail, extensive inventory, and custom work available. Guaranteed for life against frost.

843-667-9101
www.tuscanimports.com

| Circle Reader Service #362

Saunas

Finlandia Sauna Products, Inc.

Finlandia Sauna has manufactured exclusive and authentic saunas since 1964. Finlandia offers precut sauna packages and modular sauna rooms as an affordable luxury that can be included in any remodel or new construction. The company markets four all-clear western softwoods and is the only manufacturer to use 1-in. by 4-in. paneling, instead of the cheaper 1/2-in. by 4-in. material used by others. Finlandia's packages include all room parts, a choice of a Finnish made electric heater, a prehung door with choice of glass, and all necessary accessories.

800-354-3342
www.finlandiasauna.com

| Circle Reader Service #363

Energy Efficient Heaters

Solaronics, Inc.

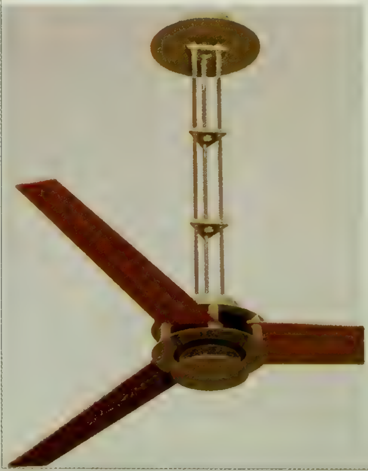
Solaronics' energy efficient 'TRUE DUAL' heaters bring unprecedented fuel cost savings of up to 75% for commercial and industrial buildings. Both air and gas flows of the patented Solaronics system provide for precise air-to-gas ratios at both the high- and low-heat stages for optimum efficiency. Applications include: manufacturing plants, warehouses, aircraft hangars, fire stations, loading docks, auto dealerships and body shops, ice/roller rinks.

800-223-5335
www.solaronicsusa.com

| Circle Reader Service #364

Architectural Ceiling Fans & Lighting

G Squared



Balanced design that is light and airy. Moving sculpture.... The San Francisco ceiling fan is a GOOD DESIGN Award winner by Mark Gajewski. Whisper quiet, powerful, reliable and beautifully made. Also available with a light kit. Lifetime warranty. Buy great fan and lighting designs on G Squared Art's web site or call.

877-858-5333
www.g2art.com

| Circle Reader Service #365

Architectural Fixtures

Lighting Universe

Over 500,000 lighting products from over 300 manufacturers. Their vast selection goes further when paired with their service excellence guarantee. Revel in the benefits of a customer service base no company in the industry matches. Their customer services representatives are Certified Lighting Specialists. They offer 110% low price guarantee, a five-year warranty and absolutely free shipping. (Featured photograph: Monorail Chandelier by LBL Lighting.)

888-404-2744
www.lightinguniverse.com

| **Circle Reader Service #366**

European Cobblestone

Eurocobble

An updated catalog features authentic European cobblestone preassembled in modular form. Modules in square, fan, concentric ring, and custom formats arrive at the job site ready for a quick and easy installation. Pedestrian or vehicular application. Eurocobble® has supplied the design community with traditional and customized paving solutions for over 20 years. Call toll free or visit the Web site.

877-877-5012
www.eurocobble.com

| **Circle Reader Service #369**

Linear Fluorescent Fixtures

SELUX Corporation

Extruded aluminum, precision fixtures in suspended, surface mount, recessed, wall mount and new Wall Washer configurations. Design flexibility and user friendly specification at your fingertips with new 2006 Specification booklet available from SELUX or download from their web site. For clean linear fixtures with many standard and custom options, SELUX M-Series.

800-735-8927
www.selux.com/usa

| **Circle Reader Service #367**

Barrier Gate Operators

FAAC International, Inc.

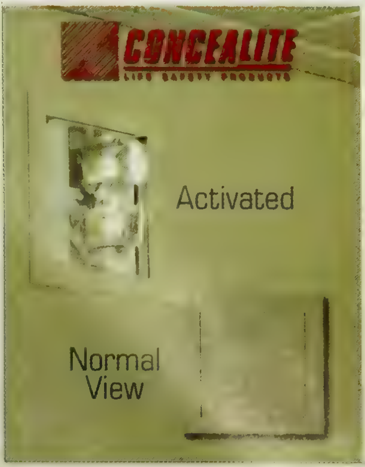
FAAC is the world's largest specialized manufacturer of hydraulic operators for barrier, slide and swing gate systems. Barrier features include 100% continuous duty operation, the ability to raise beams up to 23-ft., and control panels with full system compatibility. High-speed and economy models available. Visit their web site for brochures and specs.

800-221-8278
www.faacusa.com

| **Circle Reader Service #370**

Concealed Emergency Lighting

Concealite Life Safety Products



Concealite's 5000 Series emergency lighting is stored behind a panel in the wall or ceiling, until needed, to preserve architectural and interior design while meeting all national and state code requirements. The 5000 Series is designed for installation in gypsum board, plaster, concrete, brick or acoustical tile applications.

605-542-4444
www.concealite.com

| **Circle Reader Service #368**

Vehicular & Pedestrian Bridges

Steadfast Bridge Company

St. Joe Towns & Resorts needed custom designed vehicular & pedestrian bridges for their new residential communities near Santa Rosa Beach, Florida, so they chose Steadfast Bridges. Steadfast worked with the developer to design just the right bridges for each development. Steadfast provided ten bridges for the two communities.

800-749-7515
www.steadfastbridge.com

| **Circle Reader Service #371**

NNOUNCING THE FIRST BIENNIAL AWARD OF THE

The I. Donald Terner Prize

FOR **INNOVATION** AND **LEADERSHIP** IN AFFORDABLE HOUSING

WHAT

The I. Donald Terner Prize recognizes successful and innovative affordable housing projects and their leadership teams.

First Prize Award $25,000 **Five Finalists Awards** $5,000

WHY

I. Donald Terner was an entrepreneur, innovator, and leading builder of affordable housing. Don understood that while government or the private sector alone could not overcome the many obstacles to building affordable housing in sufficient numbers, the entrepreneurial non-profit builder might be able to do the job. In 1982, Terner set out to make his vision a reality in the form of BRIDGE Housing Corporation. Twenty years later, BRIDGE has built over 10,000 units of affordable family housing and is still expanding its reach.

WHO

An application may be submitted by anyone involved in the planning, development or operation of a project, but must include the approval of the original project sponsor, developer, and the architect. Eligible projects must be located in the United States, and have been in operation for a sufficient amount of time to demonstrate success.

WHEN

Applications are due on September 18, 2006.

HOW

Applications will be judged according to the following primary criteria:

1) Design and construction quality (e.g. sustainability, durability),
2) Number of affordable housing units produced,
3) Income-levels and social needs served by the projects,
4) Positive impact on the lives of residents and the community, and
5) Innovation (e.g. creative financing techniques, partnership arrangements, use of density to increase project impact and affordability, mix of land uses, mix of income levels).

Applicants must complete an application package which includes a cover sheet and supporting materials. **Applications are available online at www.communityinnovation.berkeley.edu**.

PONSORS

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enter for Community
novation, UC Berkeley
ollege of Environmental
esign, UC Berkeley
rad Inman
IP Capital Partners
ational Multi Housing Council
lan Stein
ne Related Companies
ne Terner Family
ne Urban Land Institute

e Terner Prize is administered by the **nter for Community Innovation** the University of California, Berkeley;)-643-7553; ww.communityinnovation.berkeley.edu

For more information go to www.communityinnovation.berkeley.edu

POSITIONS AVAILABLE

LEO A DALY

LARGE-SCALE PROJECTS IN EUROPE AND ASIA

Leo A Daly, a leading international architecture, engineering, and urban design practice is expanding. The Washington DC office, under the design leadership of Larry Oltmanns, has recently won major commissions in London, Hong Kong, and Melbourne, Australia, and is seeking leaders who are ambitious, talented, articulate, and willing to travel, for the following positions:

- **SENIOR DESIGN ARCHITEECT**
- **SENIOR PROJECT MANAGER**
- **SENIOR PROJECT ARCHITECT/ TECHNICAL COORDINATOR**

Interested candidates should send resumes to:
Director of Operations, Leo A Daly
1201 Connecticut Avenue NW, Washington, DC 20036
or email to: **HR@leoadaly.com**

WWW.SMPSCAREERCENTER.ORG

Find marketing/BD professionals with A/E/C exper. Call 800-292-7677, ext. 231.

ARCHITECT

Send resume to attn: Human Resource Manager, Coin Development, LLC, 329 W. 18th Street, Ste. 501, Chicago, IL 60616

ARCHITECT

ITH Staffing seeks an Architect. Must be licensed in Michigan with minimum 10 years experience in coordination of civil, mechanical and structural engineering. Understanding of building codes and zoning ordinances. Coordinate and oversee support staff. Ability to communicate/interface with clients. LEED Certification a plus. Submit resumes to: sharon@ith1.com or 989-631-4806

ARCHITECTURAL DESIGNER

Assist in design/dvlp/produce construction drawings and rel. architectural documents using AutoCAD; define materials, framing, mechanical & electrical systems; research building code compliance. Master or equiv in Architecture or rel. Jobsite: Sunnyvale. Resume: Innovative Design Architecture, Inc. 510 Lawrence Expwy, #105, Sunnyvale, CA 94085

SENIOR ARCHITECT

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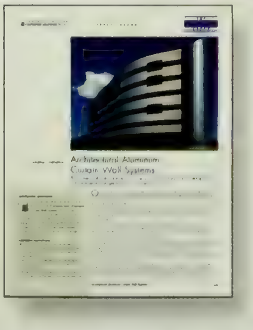

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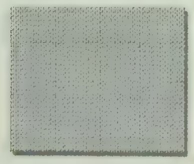

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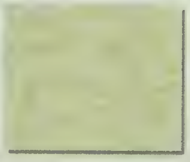

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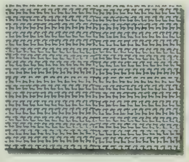

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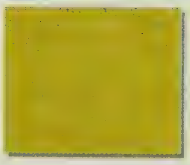

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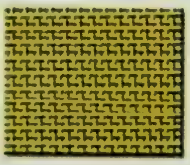

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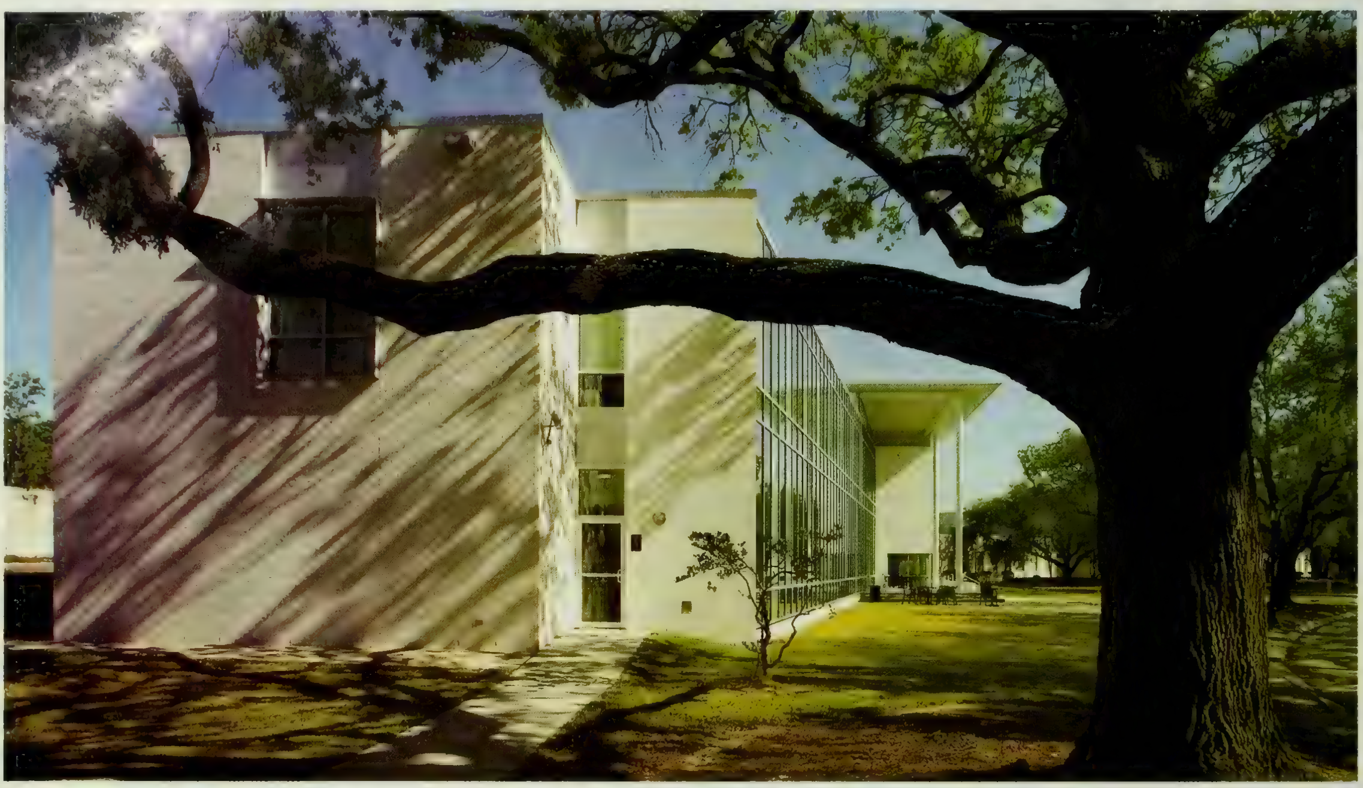


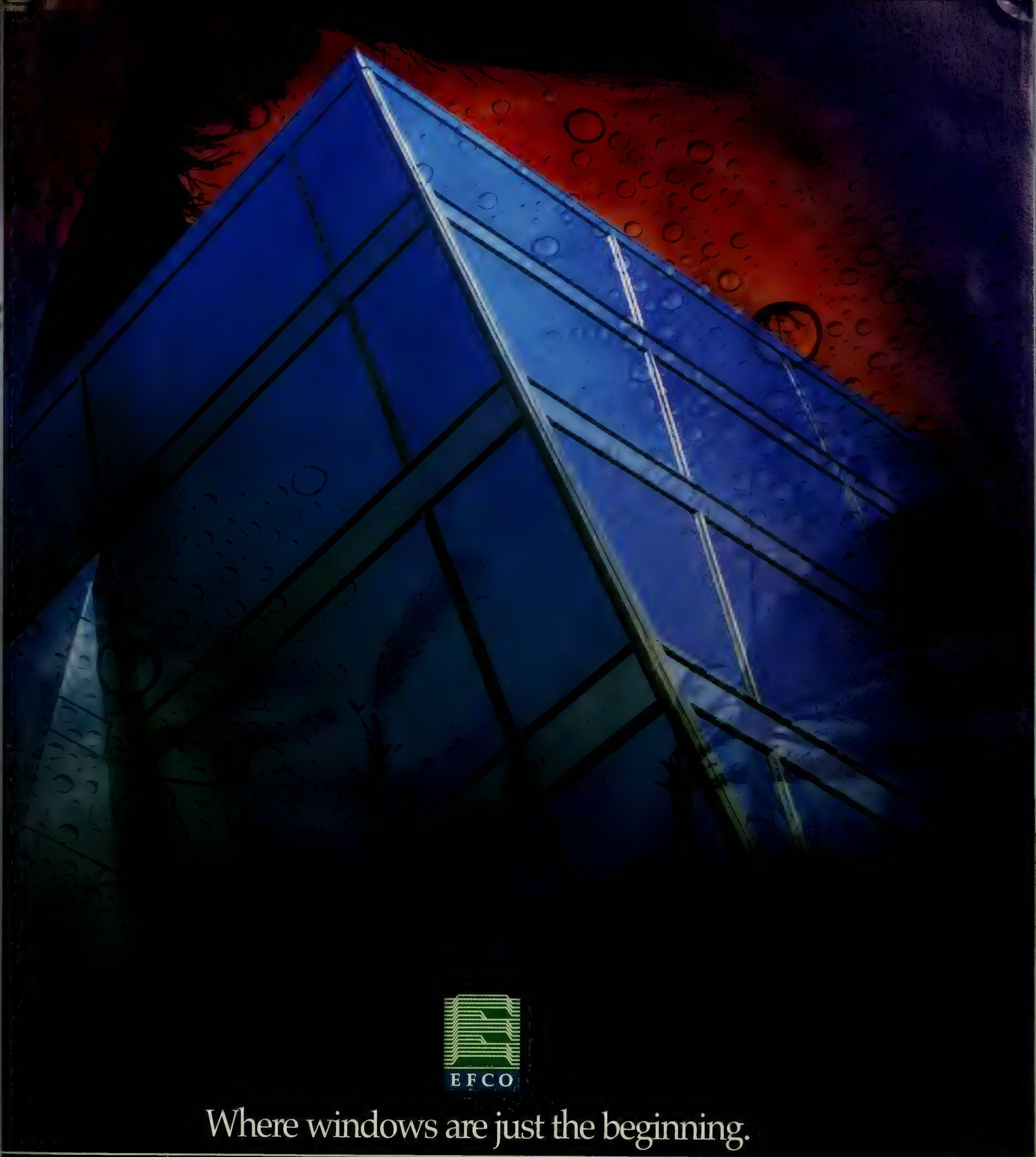
Early signs of a campus in recovery

The DUICEF had opened in 2005 (top and above). Flooding has required extensive renovation, now begun in the meeting room (below).

In comparison to the overall devastation, Dillard University's International Center for Economic Freedom (DUICEF) was relatively unscathed by Hurricane Katrina. But like the rest of the 55-acre campus along Gentilly Boulevard in the eastern part of New Orleans, it suffered severe water damage from flooding of the nearby London Avenue Canal. The two-story, 30,000-square-foot structure, designed by Max Bond, FAIA, of the New York firm Davis Brody Bond, had only opened in 2005. Marked by a gracefully high portico, where attenuated lally columns gently support a flat, overhanging roof, the gleaming glass and white-painted, brick-walled center was the first Modern-style building to be added to the 1930s campus. The private college for black students was initially designed by Moise Goldstein as a Classical-style white brick ensemble, where buildings are only two to three stories high. Before Katrina, large oaks and magnolia trees dotted the grassy lawns in a manner reminiscent of Thomas Jefferson's University of Virginia in Charlottesville.

Now Dillard awaits funding from delayed insurance and federal monies for a comprehensive renovation project. Although the flooding ruined the DUICEF's finishes, including wood paneling, and the electrical system and computer room, the steel-framed structure did not lose its glass curtain wall or many of its windows. With the pro bono consulting help from Bond, and Jon Hlafter, the university architect for Princeton, the campus's program manager, Arthur J. Clement, of Clement & Wynn—who had been overseeing the renovation of the older campus structures pre-Katrina—is putting the center back in working order.

Since Bond's father was a dean and his mother an English professor at Dillard during the 1930s, the New York architect's ties to the campus are strong. Furthermore, Bond's elegantly rectilinear structure occupies the site where his family once had a house. Needless to say, getting the center (and the campus) back to its pristine condition means a lot. *Suzanne Stephens*



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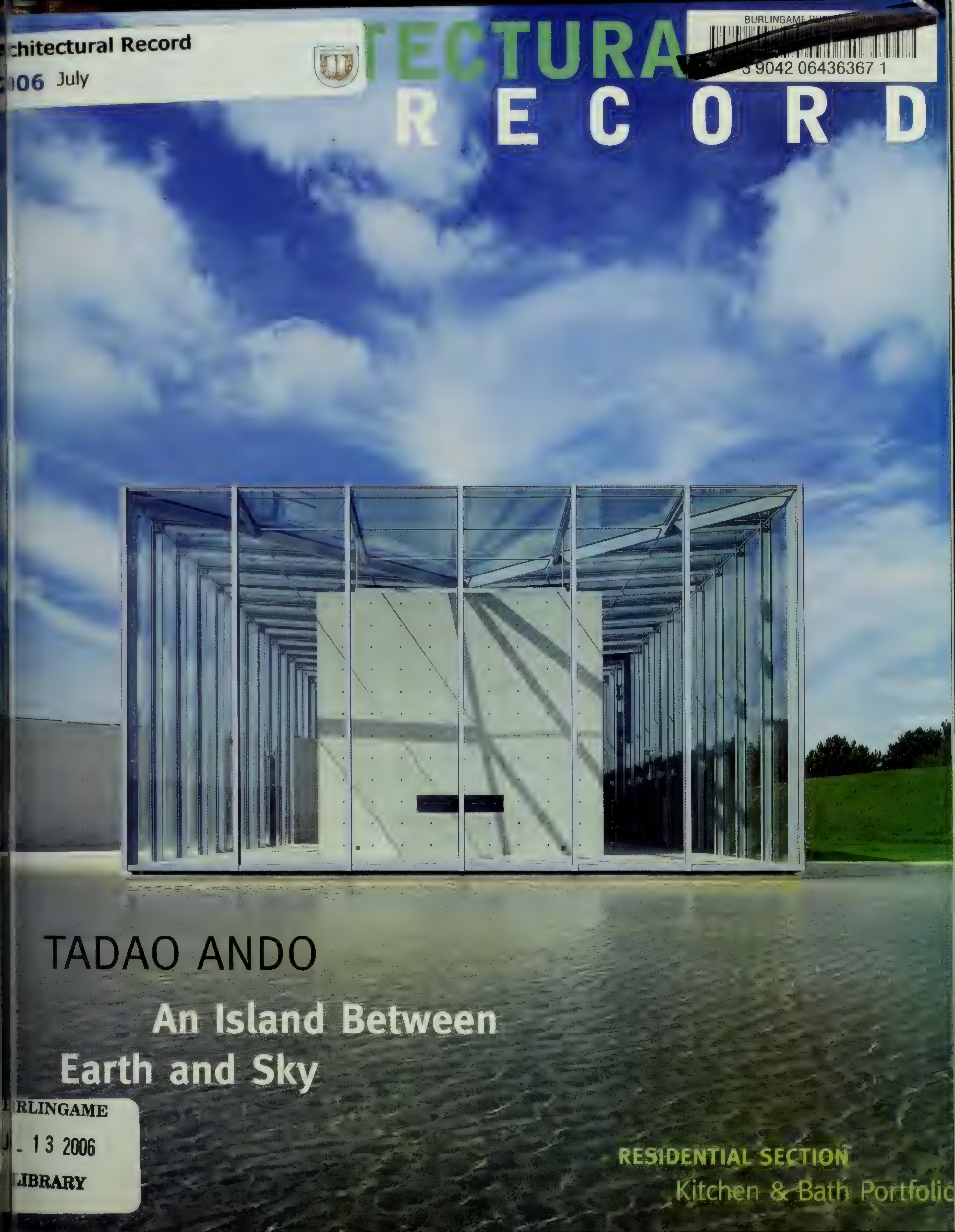

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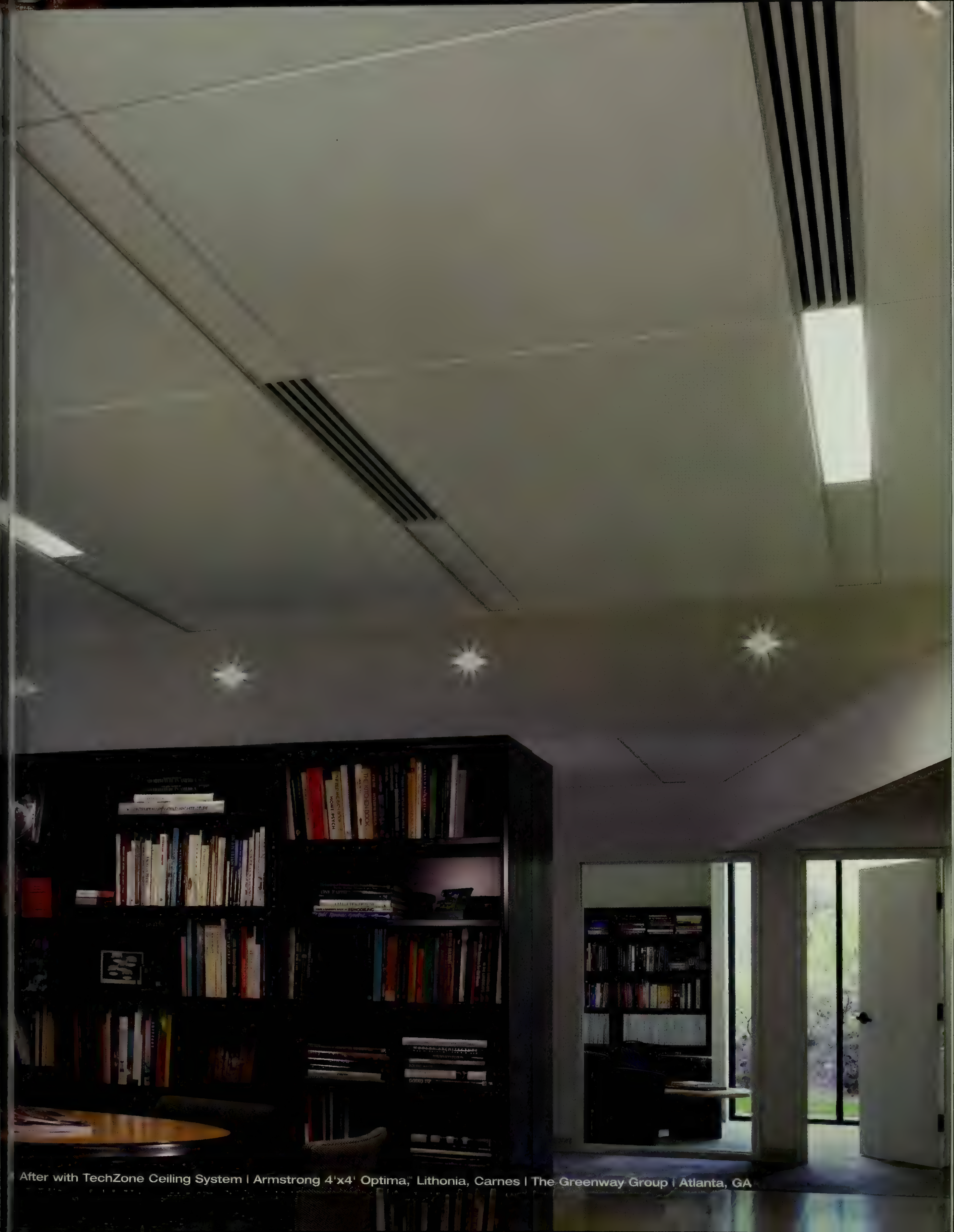

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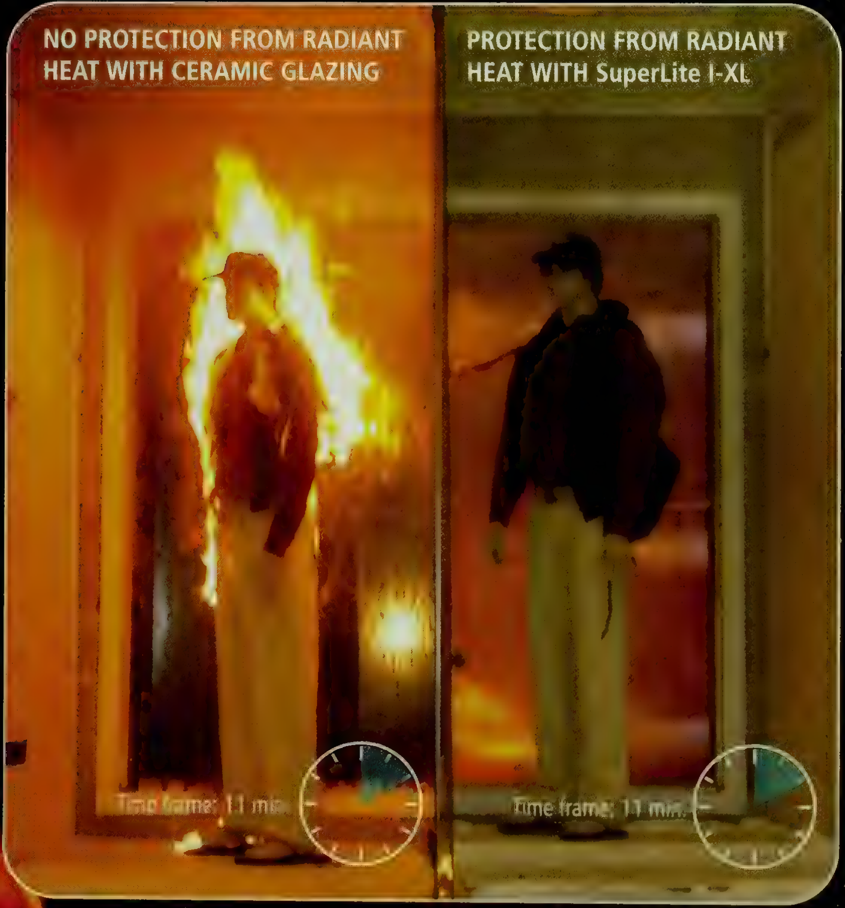
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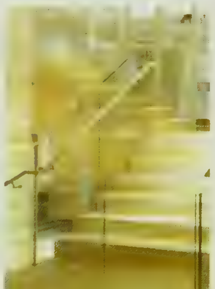

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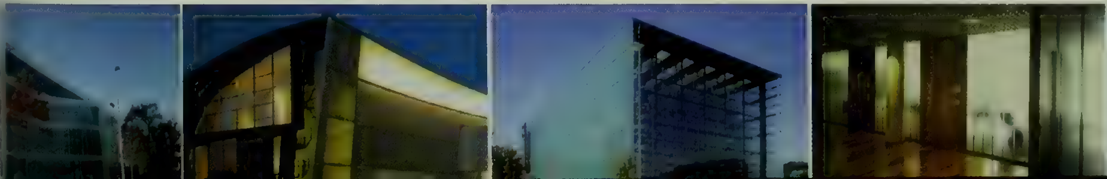

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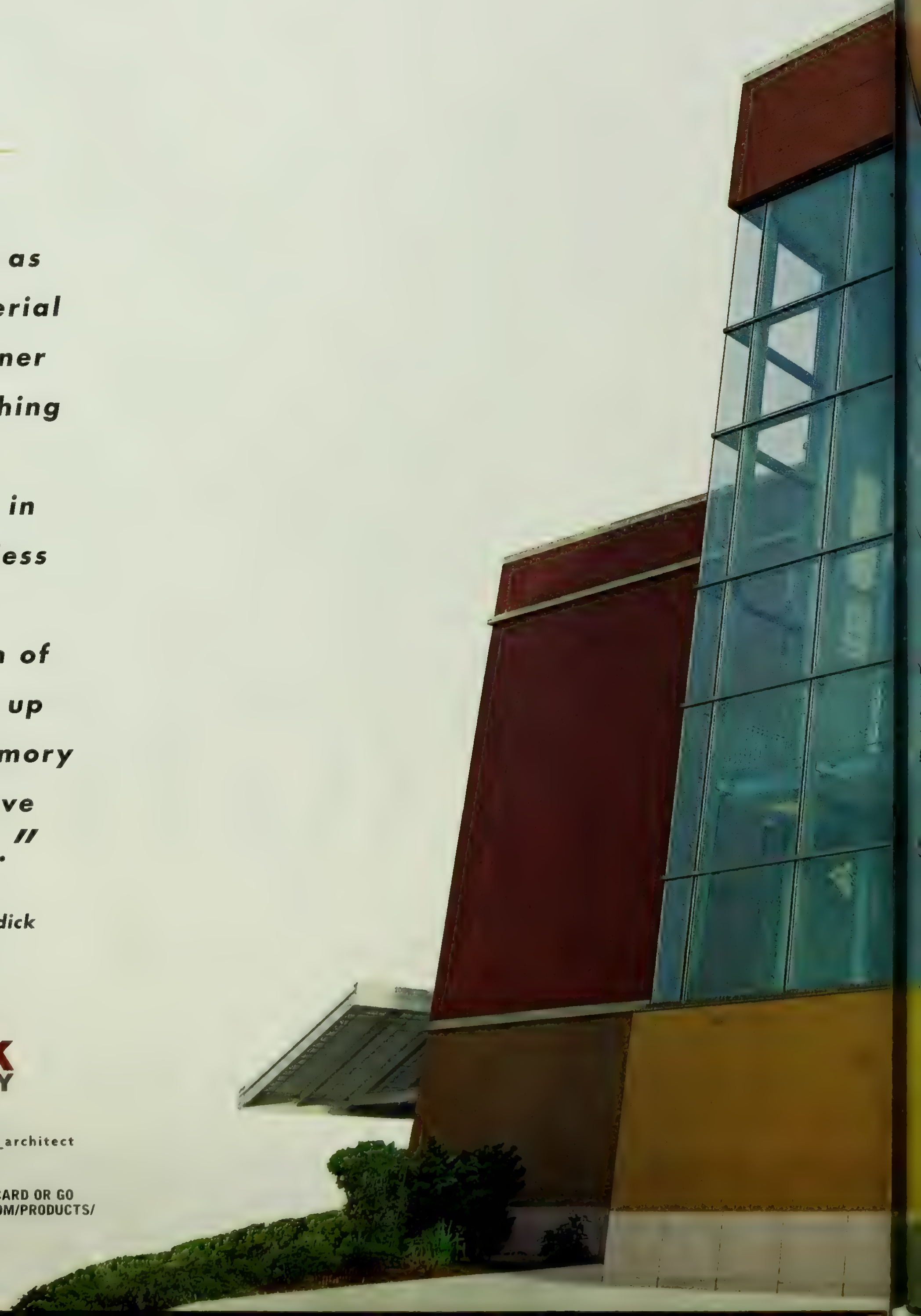

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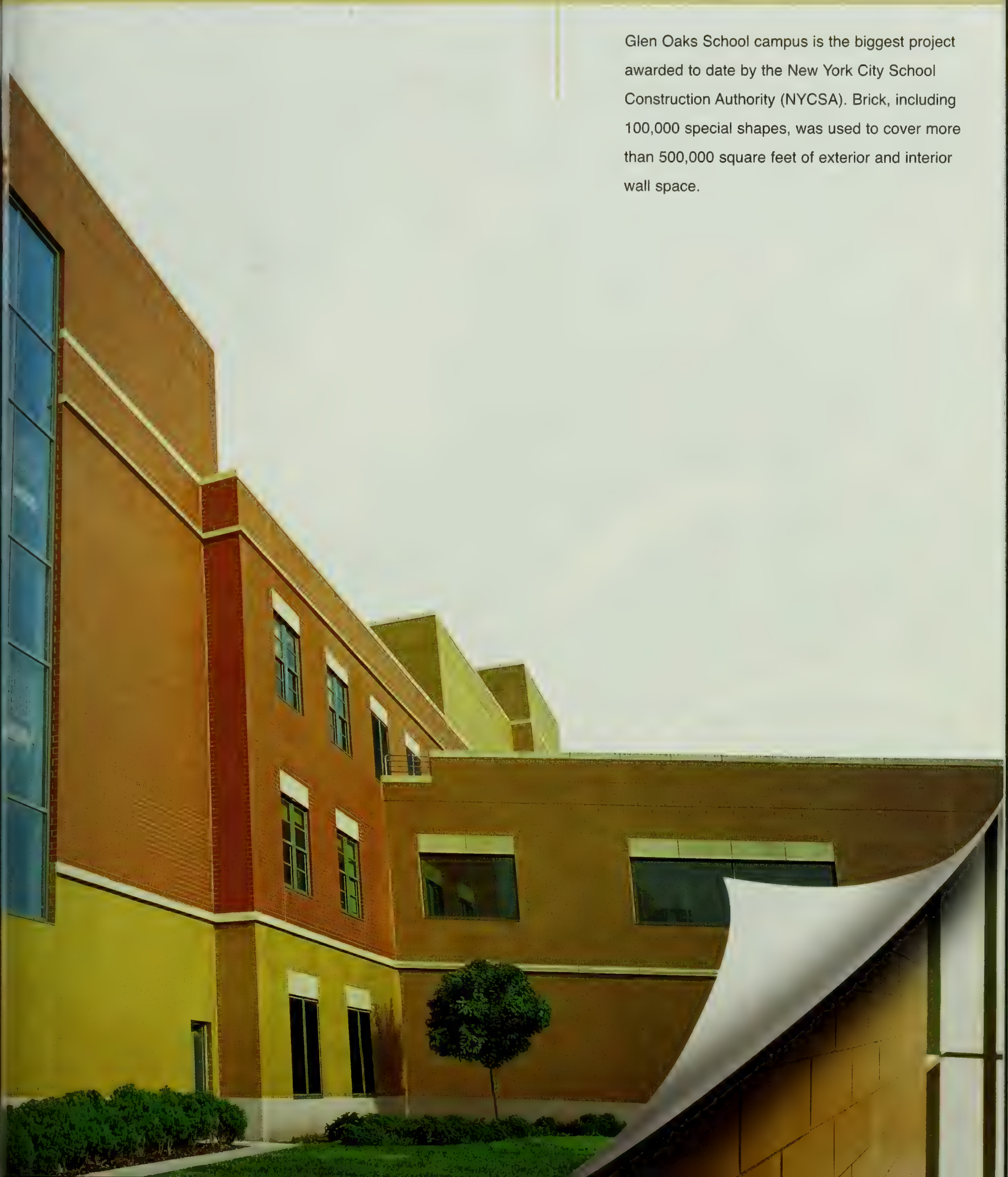

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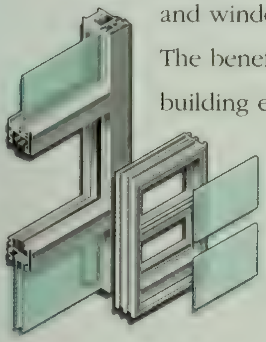

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On the Cover: *Langen Foundation. Photograph by Tomas Riehle/Architekturbilder*
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Mitchell Park and Marina
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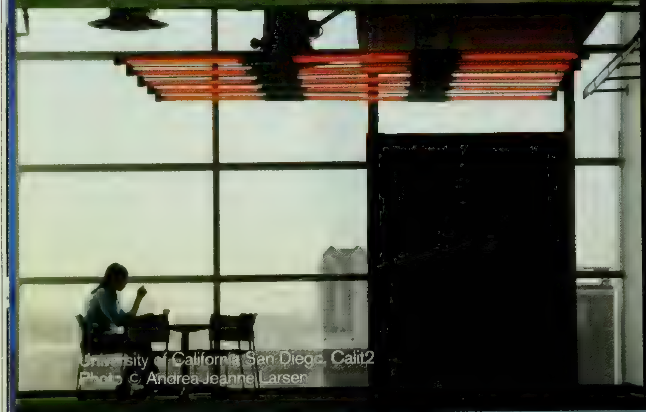

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Projects

It's a fine feast of projects this month, as place, light, materials, and program move architects to create beautiful buildings. The abundance includes museums in Madrid, Spain, and Düsseldorf, Germany, a ranch in Montana, a campus center in Massachusetts and a park in Long Island that has helped revitalized a village.

Building Types Studies: University Labs

In new laboratory research facilities rising on many college and university campuses, architects are challenging traditional models, and designing open, flexible laboratories that are shared, easily adapted for specialized equipment, and offer facilities for interdisciplinary research.

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Residential Section: Modern Barns

An evolving building type, the barn, remains a reminder of our rural past, and continues to provide a fertile source for modern interpretations, as these projects demonstrate.

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In Design this month we feature Bercy Chen Studio, an emerging firm in Austin, Texas, that brings a global and contextual sensitivity to every project. Our Work section focuses on architect Grace Kim and her new book, *The Survival Guide to Architectural Internship and Career Development.*

Katrina Design Competition Winners

Both students and professionals offered a wealth of design solutions in the 544 entries for two competitions initiated by *Architectural Record* in a partnership with Tulane University's School of Architecture. We're proud to present the seven award winners and eight citations here.

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The Essence of Education

Editorial

By Robert Ivy, FAIA

The AIA convention in Los Angeles exceeded the record books, with more than 25,000 attendees enjoying the cool California air. Members packed the trade show floor, gathered for continuing education sessions, and jammed the Art Mile and other social and artistic venues. Yet when the halls had closed, and the debris had been swept into piles for the landfill, what remains? From this perspective, one person stood out.

On the final Saturday afternoon, the spotlight fell center stage on William McMinn, FAIA, winner of the current Topaz Medallion given jointly by the American Institute of Architects and the Association of Collegiate Schools of Architecture. First, we recognize the importance of his award. The Topaz deserves greater visibility, given to someone who has "made outstanding contributions to architecture education for at least 10 years, whose teaching has influenced a broad range of students, and who has helped shape the minds of those who will shape our environment."

Bill richly deserved the Topaz for his unusual accomplishments in architectural education: At one time he was known as a "founding dean." He earned the title by launching two schools of architecture: one at Mississippi State University (a first-rate school in the nation's poorest state), and the other at Florida International University (a fast-growing institution with a diverse, commuter population). In addition, he spent a 13-year tenure at Cornell, inaugurating its undergraduate planning program and strengthening its graduate program. Along the way, Auburn and LSU also benefited from his oversight. Bill McMinn has espoused excellence wherever he has set his sights.

On June 10, Bill took the podium on the convention's last afternoon, and reminded us all why we entered architecture in the first place. For days we had been learning how to better manage our practices, and were kept busy, busy, busy earning education credits, polishing our analytical skills in sustainability, and networking with our peers. It all seemed so important, and certainly it mattered. Then Bill spoke.

In the simplest terms, he recounted the tale of a student who had accompanied him on an educational trip to Rome. Separated from the group of student travelers, the young man stood alone, prompting the dean to quiz him about his absence. The student admitted that, panicked that he might miss admission to a hallowed space, he had been waiting at the Pantheon since sunrise. He described how he had first seen images of the fabled building in his grandfather's study as a child, had studied the structure throughout his education, and now "here he was." Bill then quoted the student verbatim:

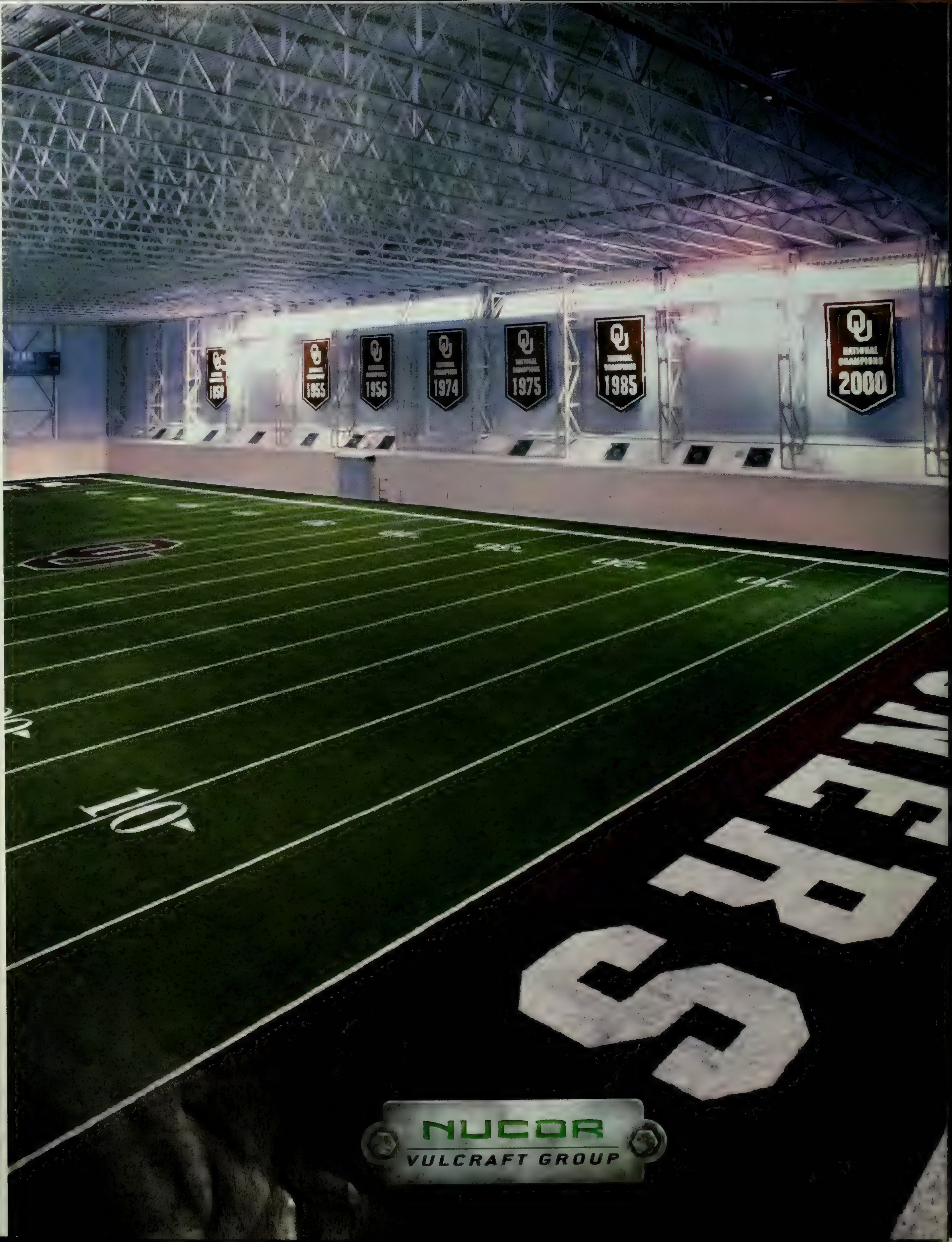
"I never believed that I would actually be in this place. It is so awesome … more than I ever believed it would be … the sphere, the cylinder, the enclosure, the fantastic space, and that amazing column of light."

The dean then knew that the student had discovered the "power and passion" of architecture that the educator describes as "the essence of architectural education," a discovery that comes personally, even intimately, and can never be taken away. "If we are good guides, it will be with them forever." Bill's own words.

That storytelling took many of us in the audience back to our own moments of recognition—the fortunate, transcendent instant when the universe clicked into adjustment and we understood the power of architecture. For some in the audience, the moment of architectural recognition might have occurred at the Salk Institute; for another, at Ronchamp. Not everyone has experienced an "Aha!": Some find a ripening of appreciation over time. The route is an individual, inevitable one.

As McMinn articulated, "Each person discovers it in their own way and their own time." The architectural experience then continues for a lifetime, deepening in appreciation, widening in scope, and never failing to amaze us. Architecture fuels our careers and our lives, as well. It's not for business reasons that we do what we do, though professionalism and economic good sense matter; nor is it for the improvement of society, or for health, or for any of a dozen other good reasons that earnest seminars and conventions promote. Bill made that perfectly clear. Instead, we make architecture because we love it. Beside that intuitive understanding, all learning pales and the lights go dim.

Robert Ivy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Letters

Modern, boxy, soulless places

With an architectural heritage as rich as New Orleans's, I find it interesting that in all of the entries for ARCHITECTURAL RECORD's/Tulane's Designing the Future of New Orleans competition ["Building a Better Gulf South," June 2006, page 112] there was not one winning submission that addressed the traditional typology of the city. Is the typology of New Orleans that vacant of worthy translation? If so, why is this a city that had (prior to Katrina's devastating blow) the largest demographic that did not relocate of any other American city? I find it architectural corruption not to identify with the existing building typology in some way.

Take photos of the places that must be demolished and attempt to re-ignite their spirit, but why squash the culture in Modern, boxy, soulless places? Modular companies are quite capable of building gable roofs and tilting them up on-site, pieces and parts do not have to be only linear cubes.

Across the Gulf Coast there are insensitive examples of homes that have simply been lifted up in the air thoughtlessly on piles with no attempt to "connect" to the ground. I urge all those involved to understand, and then reach beyond, the FEMA guidelines for flood-proofing buildings to find ideologies that address the most pressing issues: keeping the soul, and the front porch, alive with a "real" interpretive understanding of what made this city so outrageously unique. Otherwise, creating boxes like the award-winning schemes presented last month is concomitant to telling Wynton Marsalis, "After the flood, brother, play a new kind of jazz."

—P. Blackall
Via e-mail

Heroic and insane efforts

Thanks for a great job covering the details of this insane effort on the Gulf Coast and for capturing the big picture, as well. Good reporting. Beautifully written. Thanks for sticking with this complicated story. Stay tuned—it ain't over yet.

—Ben Brown
Franklin, N.C.

Viva Brazil!

To have another Brazilian architect awarded the top honor of Pritzker Prize [Record News, May 2006, page 27] makes all of us very proud. However, as usual, the Brazilian press can be counted on to ignore or downplay the importance of this honor, considered the Nobel Prize of architecture. For this press, it is much more important to trumpet that a Brazilian movie is nominated for an Oscar, or that a Brazilian athlete took 35th place in the winter Olympic Games.

The lack of an architectural culture and, consequently, the depreciation of our profession not only have their roots in Brazil's economic problems, but also in the ignorance of the nation's press.

—Alan Quintella Mendes
Salvador-Bahia, Brazil

Exurban exile

There is something that has been bothering me about your annual Record Houses issue for some time, but when I read the quotation from Monica Ponce de Leon in this year's issue calling her New England House [April 2006, page 115] "the opposite of sprawl," I just lost it. My frustration is not at Ms. Ponce de Leon or her firm, Office dA (whose expressive and innovative work I greatly admire). Rather, I place the blame on ARCHITECTURAL RECORD for exclusively showcasing single-family homes, photographed to give the impression that each dwelling is sited on at least a dozen acres. While each house you show is far more aesthetically pleasing than the typical McMansion that has sprouted across the American exurban landscape, it is your images that suggest a condition of sprawl taken to the next level.

The cruel irony is that your annual survey of the best in residential design is published as the April issue—the month in which Earth Day is celebrated. Though the sustainable design movement has progressed to the point where commercial office developers are asking architects about their LEED credentials, the wider issue of sustainable communities has been lost on your editors. Robert Ivy's editorial ["Lightning Strike," page 21] sidesteps the issue by asking the urban dwellers among us to acknowledge and consider the "worldview" (however insular) of the more exurban. Only Robert Campbell's piece ["A Neighborhood Lives On," page 63] saves the issue from totally divorcing urban planning concerns from the realm of residential design. After all, the production of housing has an enormous impact on the demand side of our national energy equation, from home heating to miles driven.

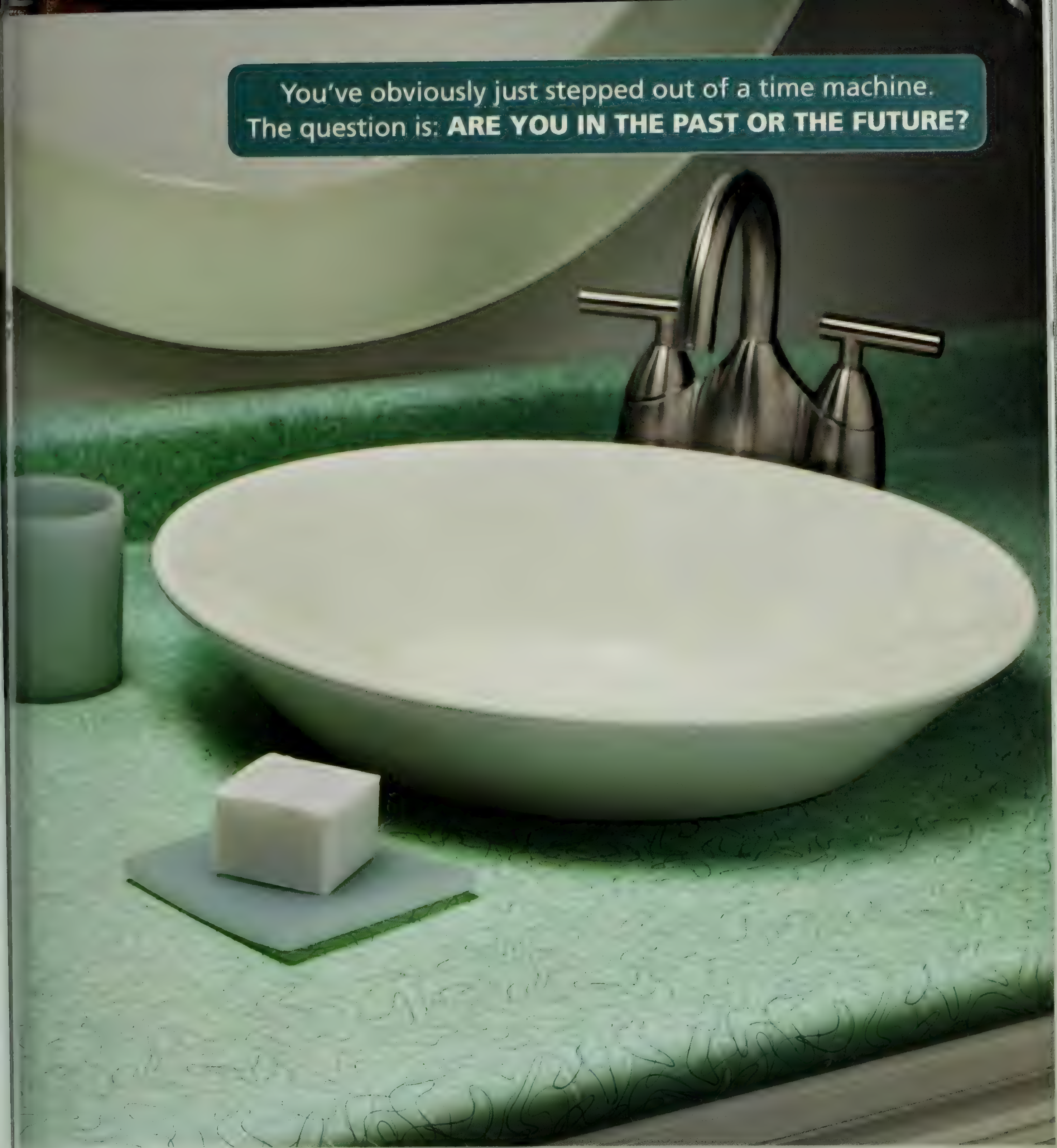
Are there really no examples of multifamily home construction worthy of gracing your glossy pages? No residential building of any kind that helps define a neighborhood—or, better yet, stitches together a broken fabric? Many architects today are trying to respond to the enormous environmental challenges of our time. I wish ARCHITECTURAL RECORD could see a way to take a leadership stance and celebrate this important work.

—Evan Yassky, AIA
Princeton, N.J.

Corrections:

A News story entitled "Renovating L.A. Mainstays" [May 2006, page 38] incorrectly labeled the material pictured on part of the roof of the new L.A. Farmer's market as Teflon Coated Glass. The material is PVDF coated PVC from Ferrari Textiles. The May Exhibitions item on "On-Site: New Architecture in Spain" misattributed some of the show's featured projects. The correct attributions are as follows: a shelter for Roman ruins by J. Mayer H. and a house of 11 small pavilions by RCR Arquitectes. The reference to Plantation Place in the article "Robo Buildings, Pursuing the Interactive Envelope" [April 2006, page 152] was incorrect. The building that the writer was referring to is Aurora Place. An incorrect caption appeared in June's Archrecord2 item on Joshua Galloway [page 68]. The caption should have read, "Infill housing in Richmond's Carver neighborhood, by BHC, with Walter Parks Architects." Additionally, it should be noted that Galloway was a recipient of a Frederick P. Rose Architectural Fellowship. In June's story on AIA Gold Medal recipient, Antoine Predock, the photographer for Venice House [page 216] should have been listed as Timothy Hursley. In the same article, two text blocks for Indian Community School and Canadian Museum for Human Rights [page 223] were transposed and did not correspond with the accompanying images. Selwyn Ting should have been listed as a project architect, instead of a member of the project team for the Science Center School in L.A. by Morphosis [May 2006, page 132].

Please send your letters to rivy@mcgraw-hill.com.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Record News

Highlights
p.26 **WTC Memorial update**
p.28 **New designs for border living**
p.32 **Wild skyscraper designs planned**
p.36 **Special section: Architecture in Asia**

Morphosis unveils plan for downtown New Orleans

In a quandary over what to do with the Katrina-devastated Hyatt Regency New Orleans Hotel, Laurence Geller, C.E..O. of Strategic Hotels, the Chicago-based owner sought the help of Pritzker-winning architect Thom Mayne, FAIA. Instead of just rehabilitating the building, he has created plans for a $715 million, 20-acre multiuse center and park that will include a refurbished Hyatt Hotel, the National Jazz Center, a new city hall, civic courthouse, amphitheater, and residential buildings.

Plans were unveiled in New Orleans on May 30. It is the first major redevelopment announced since Hurricane Katrina.

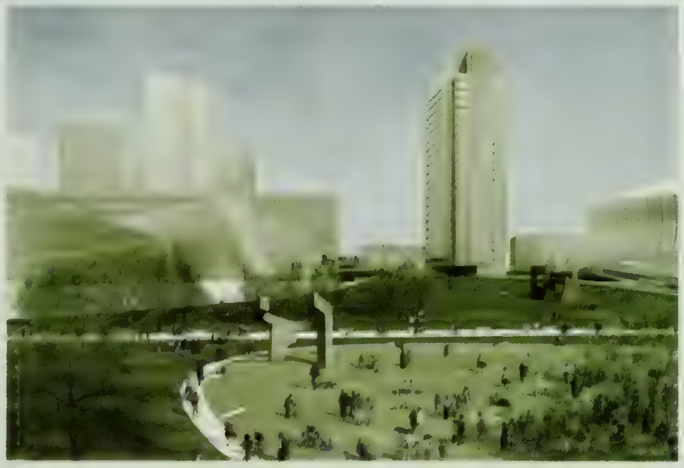
"I am not prepared to give up on New Orleans," says Geller. "We have a $200 million asset there, and it can't be ignored or moved to another city." The surrounding neighborhood includes the Louisiana Superdome, City Hall, and a shopping center.

Mayne will design the National Jazz Center, which will be home to the New Orleans Jazz Orchestra, and also include performance spaces, studios, classrooms, a library, and offices.

Designs are still preliminary, but initial renderings of the projects reveal the use of bulky, sculptural forms, silvery steel mesh, cantilevered building elements, and folded and curved planes. Throughout the park, interactive art, gardens, and fountains will reflect Southern culture. Details of most of the building projects have not been decided. "I would imagine that next year will be spent in planning," says New Orleans architect Ray Manning, AIA, the lead local architect for the district. "Then we will have a groundbreaking ceremony for the park."

Geller says he chose Mayne because "we wanted an architect with a global view, and one who would command respect from constituent components. We looked at the work they were doing in cities rather than individual buildings. His designs are dramatic, not trite, not repeating designs like some of the household-name architects."

The plans were created with the Hyatt District Rebirth Advisory Board, funded by Strategic. Experts from fields like architecture and planning, the arts, economics, and hospitality also participated in forming the plans. The project is expected to generate 6,500 permanent jobs and bring in $6 billion over the next 20 years.



The plan includes a civil courthouse (left), a jazz center and museum (center, small building) and the existing Dominion Tower (center, tall building).

The post-Katrina environment presents the prime opportunity to create a new district, says Manning. "Before Katrina, this kind of project might have encountered a lot more resistance. We have the opportunity to reenvision ourselves, and try to create a catalytic project that will help move the city forward."

The new Hyatt Jazz District will be a public/private project. Hyatt has already invested nearly $3 million on planning and has identified about $450 million in funding, Geller says. The district will be linked to areas of the city like the French Quarter, convention center, and riverfront.

It will be another month before the Hyatt's interior demolition is complete. Then, the hotel's owners will begin external demolition and reskinning. Its entrance will be relocated to the east side of the building, its interior updated, new ballroom space will be built, and a rooftop restaurant will be added. *Angelle Bergeron*

Los Angeles hosts busy AIA convention

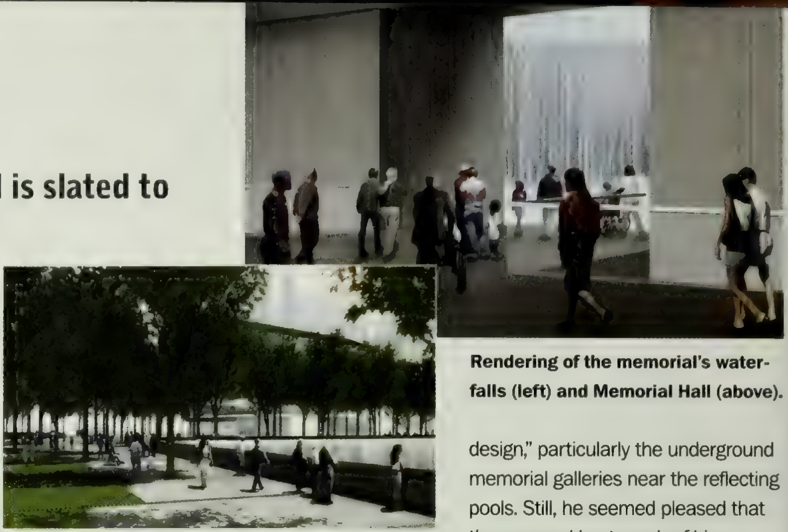
Like Los Angeles itself, the 2006 AIA National Convention, held in downtown Los Angeles from June 8 through June 10, was wide-reaching.

The theme of the event was innovation, reflected in the convention's title, "Architecture on the Edge." Los Angeles Mayor Antonio Villaraigosa spoke about fighting the city's dominant automobile culture, and the opening session closed with a panel discussion on the issue of sprawl, featuring Craig Webb, AIA, principal at Gehry Partners, and Pritzker Prize winners Rafael Moneo and Thom Mayne, FAIA.

Introducing another major topic, green architecture, AIA President Kate Schwennsen, FAIA, announced that the U.S. Conference of Mayors had adopted the AIA's resolution that all new and renovated U.S. buildings reduce their energy consumption to half the national average. Keynote speaker William McDonough, FAIA, also focused on sustainability, and the effects of overdevelopment.

Antoine Predock and Moore Ruble Yudell were honored for their 2006 AIA Gold Medal and Architecture Firm Awards, while Marshall Purnell, FAIA, was elected 2008 AIA president, becoming the first African-American to hold that position. A record 24,600 people registered for the convention. They attended hundreds of seminars with topics as diverse as building in China, condominium liability, working in design-build, and getting projects in L.A. The AIA Expo trade show portion of the convention showcased products from over 750 companies. In many ways, the convention was a coming out party for the Los Angeles area's numerous firms, many of which are now among the elite in the country. "L.A. is and will remain a place of innovation," said Mayne at the opening panel. "We'll do the best we can to advance the culture." *Sam Lubell and Charles Linn*

Proposed World Trade Center memorial is slated to undergo major changes to reduce cost



Rendering of the memorial's waterfalls (left) and Memorial Hall (above).

New York officials on June 20 announced a plan to reduce the size and scope of the World Trade Center Memorial. According to a recent cost estimate by the project's contractor, Bovis Lend Lease, the project's original budget had almost doubled, approaching $1 billion.

The report, led by New York developer Frank Sciame, suggests eliminating several elements of the memorial scheme, bringing its cost to $510 million. The report will be available for public comment until June 27, and will be presented to the LMDC board by the end of June.

The 14-page document suggests removing the memorial's entry pavilion and portions of its below-grade galleries, such as those surrounding the scheme's waterfalls. The total size of the memorial museum would be shrunk from 150,000 square feet to 120,000 square feet. It also recommends modifying plans to preserve the original Twin Towers' slurry wall, and eliminating the planned relocation of the Hudson River water line. The plan does preserve many of the memorial's key elements, such as its voids, waterfalls, pools, and the underground passage to the memorial museum.

The report concludes a month-long process headed by Sciame, whose companies, FJ Sciame Construction and Sciame Development, are two of the largest in the New York area. Sciame's committee was appointed in mid-May by New York's Governor George Pataki and Mayor Michael Bloomberg. The group included structural engineer Richard Tomasetti, architects Thom Mayne, FAIA, and Rick Cook, FAIA, and AIA New York Chapter executive director Rick Bell.

The report also suggests that the Port Authority of New York and New Jersey take responsibility for building the memorial, a role now entrusted to the World Trade Center Memorial Foundation. Acting foundation president Joe Daniels, who praised the entire Sciame report, said in a statement that this idea "can best serve the interests of the project."

Memorial architect Michael Arad said in a statement that he would accept the committee's proposals, although not without regret about "some painful cuts to the original design," particularly the underground memorial galleries near the reflecting pools. Still, he seemed pleased that the proposal kept much of his scheme intact.

Arad's initial memorial plan did not include underground galleries or an underground welcome center. The galleries were added when Arad proposed moving much of the memorial's plaza to street level. Bovis estimated the new scheme to cost $972 million, a figure that was questioned by some officials. Foundation president Gretchen Dkystra stepped down in late May amid criticisms over cost overruns and fund-raising shortfalls.

The memorial is now set to open by September 11, 2009. *Sam Lubell*

More hurricane relief approved for Gulf

On June 16, President Bush approved spending $19.8 billion in disaster relief funds that will help restore hurricane-damaged buildings and create new low-cost housing options in the Gulf Region. The legislation is part of a $94.5 billion supplemental spending measure.

The plan will include $5.2 billion in Housing and Urban Development Department Community Development Block grants, of which $4.2 billion is slated for Louisiana. Norman Francis, chairman of the Louisiana Recovery Authority, says FEMA will give residents as much as $150,000 to fix, reconstruct, or sell houses damaged or destroyed by hurricanes Katrina and Rita.

The legislation also creates a $400 million "alternative housing pilot program" in Mississippi and Louisiana to help create modular housing that is cheaper than temporary FEMA trailers. The housing would be built with waterproof cement-plank siding and sealed wall panels, and could be expanded easily. The AIA has aggressively supported such housing.

Another allotment includes $40 million in grants to be awarded by the National Park Service to state historic preservation officers, who are to submit plans for using the funds. Preference would be given to proposals that include buildings in National Heritage Areas as well as owner-occupied dwellings. No individual state can receive more than 65 percent of the $40 million total.

Richard Moe, president of the National Trust for Historic Preservation, says the new money "will go a long way toward helping restore the shotgun houses and Creole cottages that represent the heart and soul of New Orleans's historic neighborhoods, as well as the hundreds of significant houses on the Mississippi coast." *Tom Ichniowski*

New York office of OMA breaks away to form new firm

In an amicable split, Office for Metropolitan Architecture (OMA)'s New York office, led by principal Joshua Prince-Ramus, has spun off into a new firm. Unlike OMA's other offices, which are owned collaboratively by six other partners, the New York office was owned by Ramus and firm founder Rem Koolhaas.

In May, Ramus, with former OMA colleague Erez Ella, bought out Koolhaas and retained the 35-member staff to form REX, which stands for Ramus Ella Architecture. Ramus also keeps high-profile projects like Museum Plaza in Louisville, Kentucky, and the Annenberg Center for Information Science and Technology in Pasadena, California. OMA and REX will collaborate, and OMA is planning to open a new office in the U.S.

"It's really been unremarkable, no revolution, no crisis," says Ramus. "The biggest challenge now is going to be building our own identity." *Alan G. Brake*

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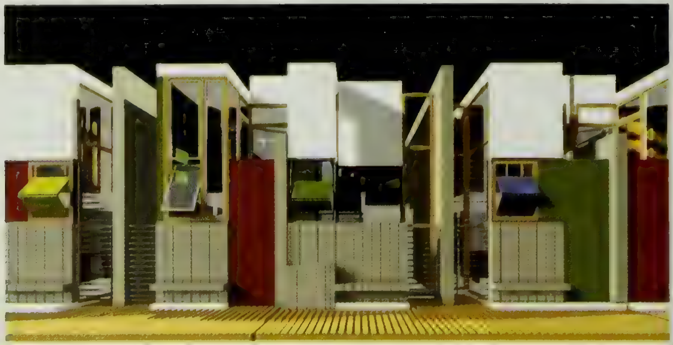
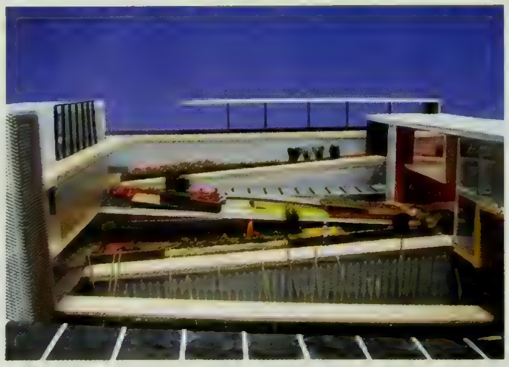
Cruz finding new solutions for border living



All units, placed in an alternating rhythm, will be made up of a series of Minimalist, geometric parcels.



San Diego architect Teddy Cruz and his firm, Estudio Teddy Cruz, have been working near the Mexican border for years. Cruz's newest design is for two affordable housing and community center schemes for immigrants in the border town of San Ysidro, California. The plan was developed with a nonprofit community center, Casa Familiar, whose client base is mostly Spanish-speaking.

Cruz's inspiration came first from discussions and brainstorming sessions led by Casa Familiar. It also came from a critical approach to the trends in new urbanism, which he says "only address aesthetics, creating a fake facade of difference without considering the lifestyle of the community." He says the downtown redevelopment of San Diego is an example of this kind of "suburban planning," meaning that he feels it is dressed up in high-end urban aesthetics without addressing zoning policy for higher density or affordable housing options.

The pilot projects, whose rezoning needs were approved by the city last year, will begin construction this summer. The first, "Living Rooms at the Border," is a mixed-use, high-density, 14,000-square-foot plan built around an old church. It will be transformed into a community center, including an office for Casa Familiar in the attic. There will also be 12 housing units, a community garden, and a central market. The second, for senior housing and child care, is connected by an alleyway and includes a semipublic lobby, a restaurant counter, and small private living spaces.

All units will be made up of a series of Minimalist, geometric parcels. Roofs will be made of metal and will have an alternating rhythm to their shape in order to supply ventilation and natural light. Interlocking housing units will be made of poured concrete and wood framing. Inside each unit will be an open 12-foot, cube-shaped space centered around a kitchen or bathroom which can be subdivided with prefab wooden or sheer walls. The senior housing portion of the project will be a repetitive series of masonry concrete walls and wood framing with the lobby walls made of a system of stackable aluminum windows. The existing church space will become a "building within a building," with steel-frame reinforcement inside the wooden structure.

The development gardens and alley pathways are connected by a promenade, and the traditional Mexican plaza in the center is meant to be the focus of public life. The senior center's food counter, built into its front facade, will allow seniors to sell food to locals to earn extra income. Its child center will cater to the many children who are cared for by their grandparents.

Cruz hopes that the approach being used in this project can be a way to think about all border towns. "We should be turning our attention away from the wall and toward the landscape, the ecology, and the communities," he says. His ultimate goal would be to create a number of urban planning nonprofits like Casa Familiar, which speak to the needs of each individual community. His plans for the future are to improve zoning laws to better address the needs of those who need affordable housing. *Dianna Dilworth*

Dutch firm to help rejuvenate Toronto's neglected waterfront

West 8, a Rotterdam-based urban design and architecture firm, has won a design competition to rejuvenate a 2.1-mile stretch of Toronto's long-neglected, much-debated central waterfront along Lake Ontario. The jury's choice was unanimous.

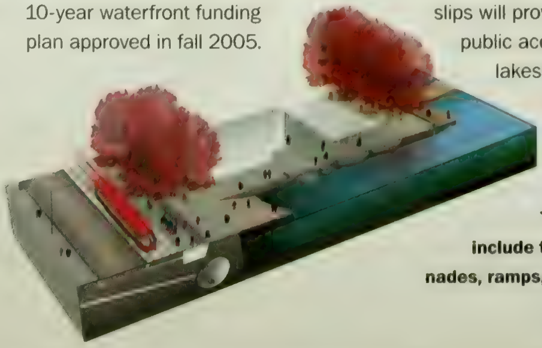
The plan will ultimately produce public promenades along the water's edge, flanked by trees, and lined with bridges and ramps. The $18 million first phase is expected to get under way by next spring, with completion by 2008. The total project is expected to cost about $54 million.

Toronto Waterfront Revitalization Corp. (TWRC), a creation of municipal, provincial, and federal government, announced the winning team on June 2. It will also include Toronto firms du Toit Allsopp Hillier and Diamond and Schmitt Architects. Financing comes from a 10-year waterfront funding plan approved in fall 2005.

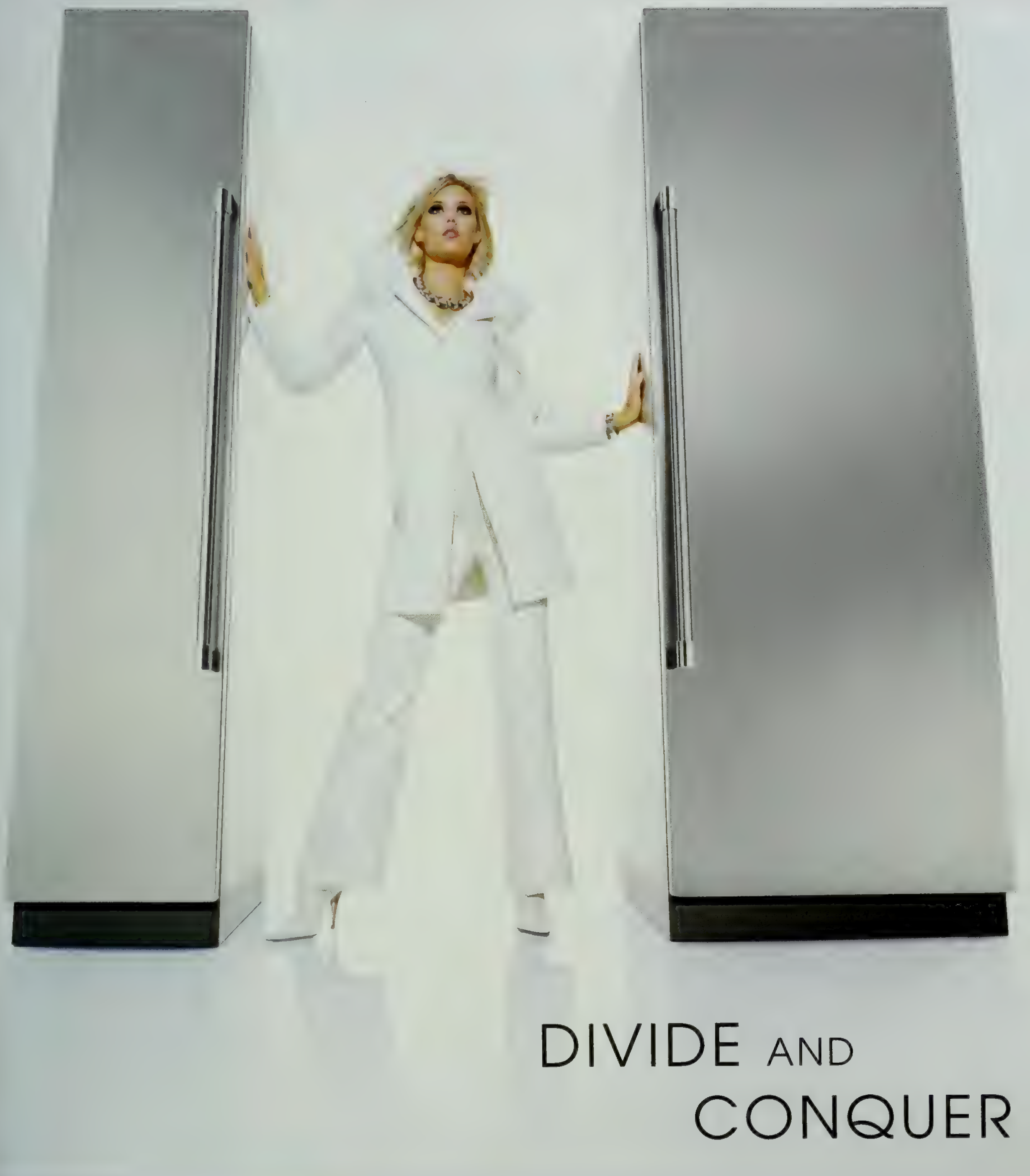
The West 8 design includes a 59-foot-wide promenade along the water, with a wooden boardwalk, floating piers, and a double row of large trees on its edges. Bridges rising from the boardwalk and spanning the ends of the slips will provide continuous public access to the lakeshore. The design incorporates sustainable features like a new storm-water management system on Queens Quay and pontoons for the floating piers designed to enhance fish habitats and improve water quality.

"We made sure that the really interesting and doable parts were within the budget," says John Hillier, a partner at du Toit Allsopp Hillier.

Five years ago, local and national politicians pledged $1.35 billion to redevelop the entire waterfront. There have been some modest improvements along the opposite ends of the waterfront, but political bickering among the governments who control pieces of the site has hampered progress. *Albert Warson*



The plan will include tree-lined promenades, ramps, and bridges.



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New and renovated museums opening in Paris

While Paris is home to many of the world's most famous museums, the list of available options rarely grows. But recently that has changed. In 2005, both the Petite and the Grand Palais reopened after renovations. This summer, a major new museum, Jean Nouvel's Musée Quai Branly, dedicated to indigenous arts, is opening, while two historic exhibition spaces are reopening their doors.

Musée de l'Orangerie
Reopened in May, the Orangerie, built in 1852, houses Monet's famous *Nymphéas* (*Water Lilies*). The $35 million, six-year renovation by Bordeaux architects Brochet-Lajus-Pueyo removed an extra floor that had been added in the 1960s, opening the space up with skylights. The intervention also created 32,290 square feet of underground gallery space. Construction was slowed by the discovery of 16th-century foundation walls, of which only 32 feet were finally preserved. The *Water Lilies* are now accessed by a bridge, spanning a narrow atrium.

The entrance to the newly renovated Orangerie Museum in Paris.

Musée Quai Branly
Not without its own construction problems due to an unstable, riverside terrain, the $270 million Musée Quai Branly, dedicated to indigenous art of Africa, the Americas, Oceania, and Asia, opens on June 20. Architect Jean Nouvel set out to hide from view "Western" concepts of construction, creating a 420,000-square foot partial treehouse, raised on pilotis and curved to follow the river. Galleries protrude from the aluminum frame, and a garden covers most of the street level, isolated from riverside traffic by a large wall of glass. The museum offices' vertical garden facade, designed by Patrick Blanc, contains over 15,000 plants, mostly from Asia, slipped into pockets in thick felt, which is in turn stapled to a PVC backing.

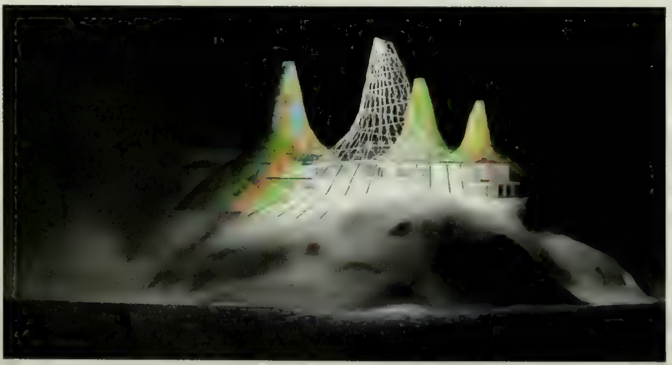
Quai Branly's vertical garden wall, designed by Patrick Blanc.

Decorative Arts Museum
Across the river, in the Marsan wing of the Louvre, the galleries of France's Decorative Arts Museum are being renovated by Oscar Tusquets and Bruno Moinard. The design gives a new transparency to the museum, opening up perspectives between the palatial rooms and views onto the Tuileries gardens. Over 5,000 pieces are presented on two floors. Opening in September, the museum brings to a close the renovation of the Louvre complex begun in the 1980s by I.M. Pei, while new gallery additions are already being planned. *Claire Downey*

"Mountains of Remembrance" chosen as Thai Tsunami Memorial

A competition for Thailand's Tsunami Memorial, dedicated to the victims of the devastating December 2004 earthquake and tidal wave, has been won by an unusual-looking project called "Mountains of Remembrance." The plan's five conical towers are inspired by the natural landscape of Thailand's Phang Nga Bay, as well as traditional Asian stupa and pagoda forms. They will be located within the Khao-lak National Park on the southeastern coast, in a forested area overlooking the ocean beaches that were the hardest hit in Thailand by the tsunami. The scheme was presented by the young Spanish architects Ana Somoza and Juana Canet of Disc-o Architecture, Madrid, and their collaborators.

The competition was sponsored by the Thai government and managed by the Council of Architects, the nation's professional association. It attracted 680 entries. A jury selected the winning scheme from among five finalists, with second prize going to a Finnish team, Anu Puustinen and Ville Hara of Avanto Architects.


The towers are inspired by both natural and architectural forms.

Somoza and Canet explained that their design seeks to "create an artificial piece of nature integrated in the park." Organized around a "Lagoon Square," the towers will be built of steel tubing and cable with ceramic skins whose characteristics will change according to their exposure to light. The Memorial Tower, covered in natural vegetation, will be the tallest, at 125 feet, with an open interior space for meditation. The other towers will contain a museum, a warning center or climate station, an amphitheater, and a restaurant and shop. Participating on the winning team were Tectum Engineers and Thai Architecture design firm Naga Concepts. *David Cohn*

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Tower adds new twist to Dubai skyline

Skidmore, Owings & Merrill (SOM) has started construction on a 75-story helix-shaped tower in the Dubai Marina, one of the wealthy Emirate's prime residential neighborhoods.

The "dancing" skyscraper, to be named Infinity Tower, will rotate 90 degrees as it rises while maintaining a constant floor plate throughout its height. SOM Managing Partner George Efstathiou, AIA, predicts that the tower's winding shape will make it the marina's principal landmark, and perhaps a symbol of Dubai itself. According to Efstathiou, the building's form will offer residents views of the waterfront without disrupting the vistas of neighboring buildings.

The 995-foot-high tower will comprise 456 residential units, ranging from studios to full-floor penthouses. It will include a street-level shopping arcade, conference centers, lounges, a child-care center, a health spa, exercise facilities, and an outdoor pool.

The structure will be constructed of cast-in-place, high-strength concrete columns stepped 1 degree per floor in order to create the distinctive helix shape. The tower's architect, design partner Ross Wimer, AIA, says that while the building's form responds to its site, its articulated surface responds to the climate, making its architecture a derivative of the "interaction of natural forces."

SOM is also currently in the process of constructing Burj Dubai, a residential tower that is set to be the world's tallest building. Both projects are scheduled to be completed by 2009. *Seif El-Rashidi*

The design of the building comprises two intertwined bands.

RMJM designing "sensuous" skyscraper for Moscow

The procession of planned high-rises for Moscow's nascent financial district continued in May with the announcement by British architects RMJM that they received Mayor Yury Luzhkov's approval for a 46-story "City Palace" tower. Drafted in collaboration with Scottish artist Karen Forbes, the building's spiraling form is arguably the most sculpturally exuberant proposal yet presented in Moscow.

Described by its creators as "sensuous" and "organic," the tower's structure, composed of two twisting bands whose entwined coils evoke the joining of male and female halves, is intended as a metaphorical extension of the wedding motif. The rotating form plays off the more traditional massing that dominates the surrounding cluster of buildings. Stylistically it also responds to the sinuous structure of the retail and entertainment center at the central core of the district. The tower's two ribbons are locked in a gesture of tense but fluid ascent. A glazed screen draped between them follows the structure, coalescing into a lobby and an entrance canopy at the base while enveloping a ballroom space atop the building.

The tower will serve as a prominent entryway into the Moscow-City district, occupying its southeastern plot, which connects to a completed pedestrian bridge. City Palace will contain about 1.8 million square feet of space, divided evenly between retail, administrative, and office functions, with a parking lot planned on three underground levels.

Commissioned by City Palace LLC and CSC INTECO, the building is anticipated to cost over $1.5 billion. It is expected to be complete by 2009.
Paul Abelsky

Safdie's Singapore resort will include massive sky garden

Moshe Safdie and Associates has been selected to design one of its largest projects to date: a new resort in Singapore that will include three 50-story hotel towers and a 1,000-foot-long public sky garden. The project, backed by U.S. gaming company Las Vegas Sands, will be called the Marina Bay Sands resort. Safdie will master plan and design the $3.6 billion undertaking, which will also include Singapore's first casino. The firm will partner with the Singapore office of U.K.-based Aedas.

Located on Marina Bay in downtown Singapore, the complex will be sandwiched between a 2-acre garden and the waterfront. Near the base of the hotel towers, the walls will splay out to hold a continuous atrium and lobby that links the three towers at street level. The unique sky garden, atop a large platform, will cantilever out a minimum of 16 feet. To the north, the platform will have a 164-foot overhang. The architects are "treating the cantilever as an airplane wing," says project architect Trevor Thimm. They have consulted Canadian wind engineering specialists RWDI, and are now working with Arup on engineering.

The resort will also include two 2,000-seat theaters, a five-story convention center, and a metal-and-glass arts-and-science center taking the form of a lotus flower. Extending out from the waterside promenade, the Bayfront Promontory will be built on hydraulic lifts that will allow it to change from a stepped seating area into a level stage for events.

The towers will be linked by a 1,000-foot garden.

Unveiled by government ministers at the end of May, the scheme joins other large-scale urban development projects now slated for construction around Marina Bay, an area being touted as a rapidly emerging downtown district. The resort is set to open in 2009. *Robert Suc*

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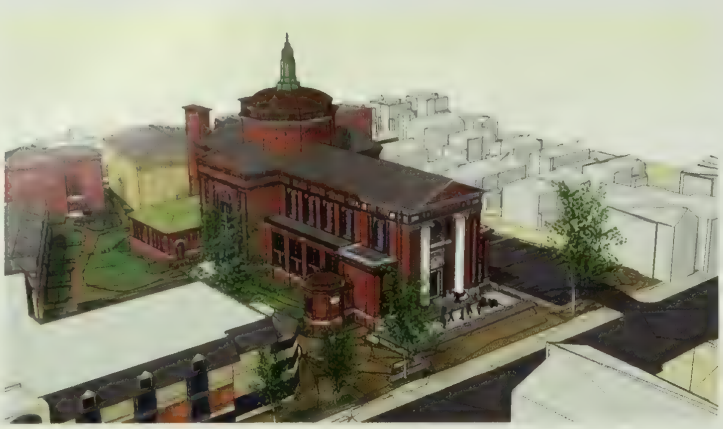

Blessed Sacrament in Jamaica Plain is being converted into mixed-income housing.

After closings, Boston churches getting new uses

The complex closing of many of the parishes in the Roman Catholic Archdiocese of Boston has given way to their perhaps more complex redevelopment. While many church buildings will see continued use, many have been marked for housing, retail, and office space.

As of this spring, the archdiocese had sold property associated with 21 of the 62 eastern Massachusetts parishes suppressed since 2004, taking in $52.6 million.

Church officials attribute the parish closures to demographic changes, fewer clergy, and financial difficulties, often stemming from abuse-related court cases. The archdiocese in April reported a $46 million deficit.

Many of the buildings are historically significant, and church officials contend that they have asked potential buyers to address issues of preservation and affordable housing.

Citywide, the parish closings will impact 11 neighborhoods, according to Randi Lathrop, deputy director of community planning for the Boston Redevelopment Authority. "It can totally change the composition of a neighborhood. It affects traffic, parking. It's a totally different use," she says. Not all transformations will be radical, she notes. In East Boston, property belonging to St. Mary Star of the Sea Church is slated to become a photography studio and commercial office space, without any major physical changes. Northeastern University bought St. Ann's church in the Fenway neighborhood to convert it into a nondenominational chapel.

Particular attention has been focused on the Blessed Sacrament parish in Boston's Jamaica Plain neighborhood. It is the first major property to enter the planning process. Bought by the Jamaica Plain Neighborhood Development Corporation and New Atlantic Development for roughly $6 million, the site includes seven buildings, including a 1917 Renaissance Revival basilica, schools, a convent and a rectory. The plan calls for mixed-income housing, commercial and educational uses, and affordable housing.

Allston, Massachusetts–based Elton & Hampton are attempting to convert the basilica, with its 85-foot dome, into financially viable housing without sacrificing its character. Other than punching large windows into the ornamental brickwork, the designers are following Boston Landmarks' guidelines to preserve the exterior. The plan preserves the entryway, the narthex, and part of the first floor as community space. A lobby atrium will reveal some of the soaring interior. An adjacent new mixed-use building will have a modern form, but its masonry structure will echo the church's.

Still, the placement and style of new buildings on the site has been controversial, according to firm principal Nick Elton. Community and preservation groups have lobbied to keep the space around the basilica open and to preserve views of the church from the surrounding area, and some have pressed for historical revival over contemporary design.

Ted Smalley Bowen

New York is hotel country

New York is undergoing a hotel construction boom. Already the most popular city for tourists in the country, its new hotel rooms are in particular demand because so many older hotels, like the Plaza, the Wyndham, and the St. Regis are converting rooms to condominiums. And with the boutique hotel trend showing no sign of slowing down, it's the perfect place for designer architects to use their talents.

Rockwell Group's Night Hotel.

Initial sketch of Standard NY Hotel.

Many industry experts are anticipating this trend to continue. According to Pricewaterhouse Coopers, in the past two years, New York's hotel sector has seen a 4.5 percent increase in occupancy; an average daily room rate increase of 9.7 percent; and 80 percent midweek occupancy average in 2005. These numbers and New York's place on the cultural map lead speculators to believe that Manhattan is the place to be for boutique hotels.

Hotels are being designed by Architects like Polshek Partnership, The Rockwell Group, John Pawson, Gene Kaufmann and Ed Rawlings. These new high-end design sites are being laid, built, and opened all over the city, from Times Square to downtown and extending their way into Brooklyn. *Dianna Dilworth*

New and future hotels in the city:

The Loft Hotel Tribeca
Gene Kaufman: 130 Duane St.
Allen Street
Ed Rawlings: 200 Allen St.
The Gramercy Park Hotel
John Pawson: 50 Gramercy Park N.
The Lamb's Club (adaptive reuse)
Thierry Despont: 130 West 44th St.
The Standard NY
Polshek Partnership: 848 Washington St.
The Blue Moon Hotel
Jung Wor Chin: 100 Orchard St.
The Downtown Hotel
The Rockwell Group: 377 Greenwich
Columbus (renovation)
Steven Scarloff: 6 Columbus Circle
The Night Hotel
Mark Zeff/The Rockwell Group: 132 West 45th St.
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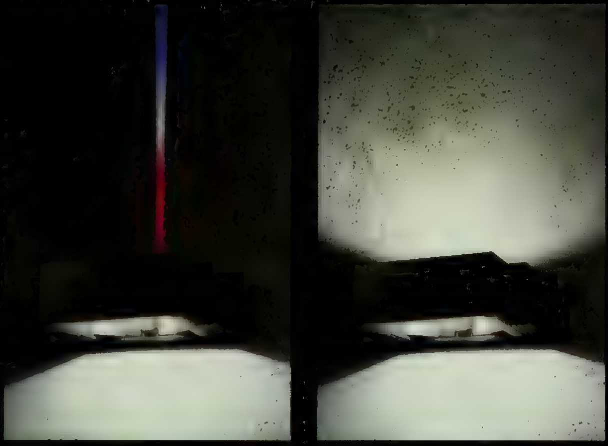

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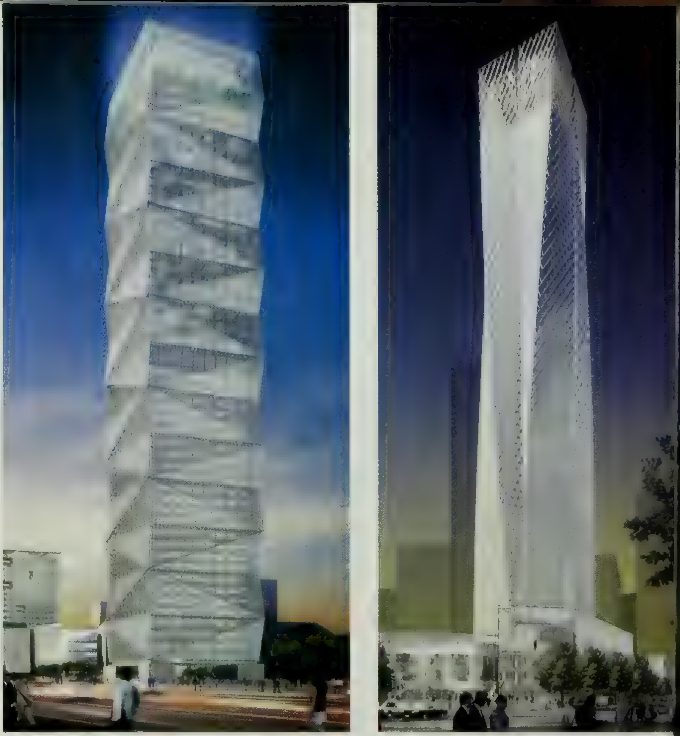
SOM's skyscraper innovation has moved to China

Skidmore, Owings & Merrill (SOM), architect of New York's planned 1,776-foot Freedom Tower, is known perhaps more than any other firm for its skyscraper design. SOM structures, such as the Sears Tower in Chicago and Lever House in New York greatly helped establish the U.S. as the world's leading tall-building innovator during the latter half of the 20th century. But, as critic Nicolai Ouroussoff recently wrote in *The New York Times*, the firm's recent domestic tall building work has been more formulaic. What he didn't mention was that the firm is still putting together groundbreaking work in China, which has become a laboratory of sorts for the firm's experimental skyscraper design work.

The company has over 50 buildings and planned projects in China, and more than 15 of them are skyscrapers. Most utilize the firm's own engineers. Firm partner Tom Kerwin says that Chinese clients are much more willing to embark on experimental work than their counterparts in the U.S., who are often hesitant to take commercial or security risks, or to upset neighbors or trade unions.

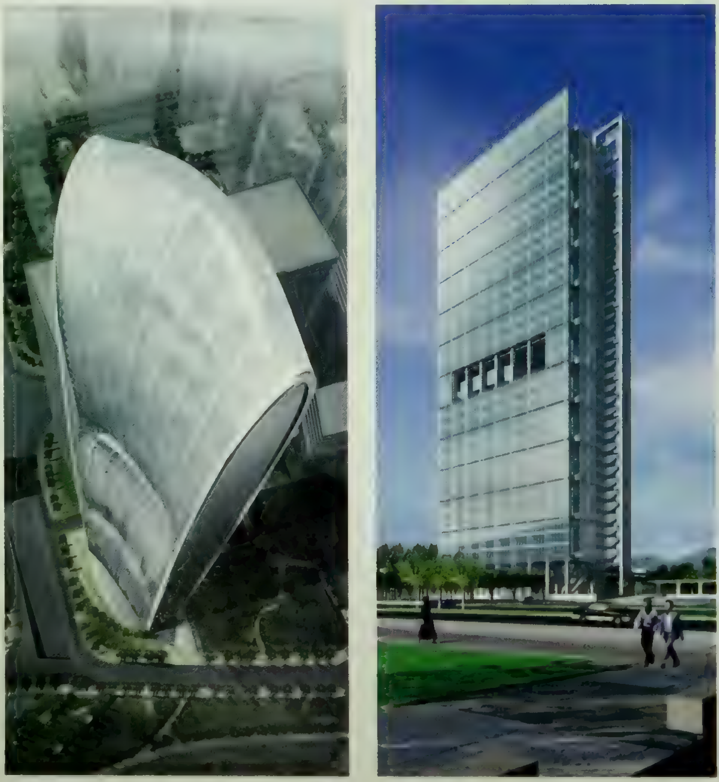
"There's a commitment to upgrading the quality of life in China," says Kerwin. "They take real pride in pushing the envelope." Lack of public dissent, cheaper building materials, a demand for urban density and green buildings, and an intense desire for international recognition also encourage such work.

The firm's most recent commission is the 1,000-foot-tall Pearl River Tower in Guanzhou, for the Guangdong Tobacco Company, which SOM says will be one of the greenest buildings in the world. The project's green elements include a water-retention area; basement fuel cells, which produce electricity by extracting hydrogen from natural gas; facade-integrated photovoltaics; a condensate-reclamation system that collects water and reuses it; and stack ventilation, which captures and uses heat caught between the building's double-layer facade. The tower's curved shape forms two apertures where air is directed into wind turbines.



Jinao Tower (left)'s exterior appears to have paper-like folds. The Nanjing Jinling Hotel will twist on its way up.

The Pearl River Tower (left) in Guanzhou is designed to capture wind power. Poly International plaza (right) will have a large open-air terrace at its center.



Some of SOM's other towers in China:

- The 1,050-foot-tall Nanjing Jinling Hotel, which also features offices and apartments, is sited in the heart of Nanjing's commercial center. The building's skin forms a diagonal grid that functions like a twisting tube. It looks a lot like one of the firm's original designs for the Freedom Tower. Construction should wrap up in 2008.
- The 760-foot-tall Jinao Tower, an office and hotel complex in Nanjing, will feature a glass facade that alternately folds inward and outward, articulating a sense of movement. Like New York's new Hearst Tower, it is built around a diagonal-grid bracing system, an efficient support for lateral load that uses less steel than the typical skyscraper. The building's double-skinned surface will provide solar shading and create an insulating climate chamber to reduce temperatures inside the building. Completion is set for later this year.
- Nanjing Greenland, a complex of three steel-framed, concrete-core glass towers. The tallest building, at least 985 feet tall, will include a faceted-glass surface imbedded with irregularly spaced slots for green space that "march vertically up the facade," according to Kerwin. The other towers, about 100 meters tall, will include roof gardens and a sunken green square.
- The 990-foot China World Trade Center, in Beijing, will be the centerpiece of Beijing's developing business district when completed in 2007. The glass-and-steel tower gradually steps back as it rises, looking a bit like a giant square telescope. Its facade is layered with a series of faceted, vertical glass-and-metal fins,

creating a texture that the firm says will look somewhat like a waterfall.

- Poly International Plaza, in Guangzhou, will feature a glass curtain wall, and will be built with metal cross bracing, allowing for column-free space for office floors, and letting light to enter all areas of the building. A large opening halfway up the building will reduce wind loads, and also serve as an outdoor terrace. Completion is planned for 2007.

Meanwhile, progress on the Freedom Tower has languished due to a lack of tenants, and its original design was compromised due to security concerns. Perhaps it's a symbol of America's lack of innovation, even complacency? "There are some places in the world that have this optimism and can-do attitude. Sometimes I wonder if we've lost that," says SOM engineer Bill Baker. The Empire State Building, for example, was built in 18 months. *S.L.*

Nanjing Greenland's facade will include slots for green space.

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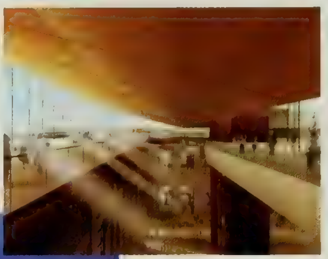
Architects to transform two museums into National Museum of China

The People's Revolutionary Museum and the Chinese National History Museum, which both occupy a vast Stalinist building on the eastern side of Tiananmen Square in Beijing, will soon merge into a single National Museum of China. The new museum will remain in the same home, but von Gerkan, Marg und Partner (GMP), from Hamburg, Germany, will design a comprehensive renovation.

GMP's design is a careful study in deference to context. It preserves the building's eastern facade (which faces Tiananmen), and the northern and southern wings, which are built in the Socialist Realist style typical of grand, civic projects of 1950s China. These spaces will house the bulk of the museum's galleries and will undergo refurbishment.



The museum, with a cantilevered roof, will be located on Tiananmen Square.

The existing core will be replaced with a large public space crowned by a large cantilevered roof that contains exhibition spaces punctured by an intricate series of rectangular openings, evoking the hutong layout of old Beijing. Access for passersby will be allowed in the area below, creating an interior public plaza.

The large addition alludes to traditional Chinese temple architecture, found in the Forbidden City, opposite the museum on the northern side of the Avenue of Eternal Peace. In addition, it brings the museum to the height of the Great Hall of the People, which faces it from across the square.

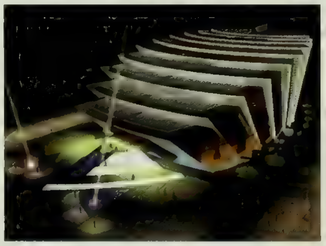
GMP was awarded the project after an international competition that included Foster and Partners, Herzog & de Meuron, the Cox Group, OMA, RTKL, and KPF.

"Our design was focused more than the others on Tiananmen Square," says GMP's Stephan Rewolle. "We did something that comes natural [for the setting]."

Completion is expected in time for the 2008 Olympic Games. In addition to the museum, GMP is designing developments in Beijing, Dalian, Shanghai, Guangzhou, Fushan, and Shenzhen.

"We didn't plan to come to China. It was a coincidence that we did an entry for the German School in 1998," says Rewolle, who nearly seven years later now heads an 18-person Beijing office. The firm recently opened offices in Shanghai and in Hanoi, Vietnam. *Daniel Elsea*

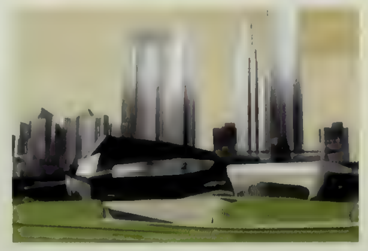
Chinese cities compete for dynamic opera houses



Carlos Ott's Wenzhou Grand Theater.

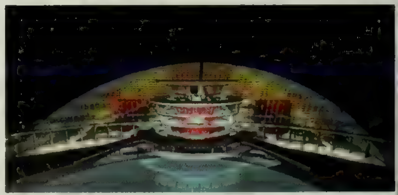
To some extent, China's construction boom has become an exercise in architectural one-upmanship, with cities competing with one another to erect high-profile buildings by famous architects. For many years, skyscrapers have been the most popular way of attracting attention. Now opera houses are taking center stage.

Beijing and Shanghai are both capping recent growth with extravagant opera houses designed by French architect Paul Andreu. The Beijing project, the elliptical-shaped National Grand Theater (often likened to an egg), measures 1.6 million square feet and should be completed at the end of this year. Following their lead, other fast-developing cities are building grand performance facilities that express a level of cultural achievement. The Guangzhou Opera House, designed by Zaha Hadid, for example, broke ground in mid-January and is part of the city's plans for urban redevelopment that will cost $22 billion. Sitting on the banks of the Zhu Jiang River, the fluidly designed Opera House will include an "organic twin-boulder design," made up of two separate but connected buildings. Located at the foot of a major boulevard as well as on the riverfront, it will provide open access to the water and a strong connection to the cityscape.



Zaha Hadid's Guangzhou Opera House.

Uruguayan architect Carlos Ott, who designed the Bastille Opera in Paris (1989), is now busy on four opera houses in China. Working with the Canadian firm Petroff Partnership, Ott has designed projects in Hangzhou, Wenzhou, Zhengdong New Town, and Dongguan, all awarded through competitions.



Rendering of now-complete Hangzhou theater.

Ott's Hangzhou Grand Theater—which includes a 1,600-seat opera hall, a 600-seat concert hall, and a 400-seat theater—opened near the end of 2004. The architect describes the moon-shaped building as "a pearl in its oyster shell."

Nearing completion in Guangdong Province, Ott's Dongguan Grand Theater will feature a 1,600-seat opera house and a 400-seat multipurpose hall, designed with Tongji University. In Zhejiang Province, Ott's accordion-shaped Wenzhou Grand Theater is scheduled to be completed this year. The building will house a 1,550-seat opera house, a 650-seat concert hall, and a 200-seat theater. And in the new town of Zhengdong, Ott has designed the 680,000-square-foot Henan Art Centre, which will include an opera house, concert hall, multipurpose hall, folk art museum, and fine art gallery.

With so many new opera houses opening or under way, it remains to be seen if the public will come and fill all the seats. *Aamir Wyne*

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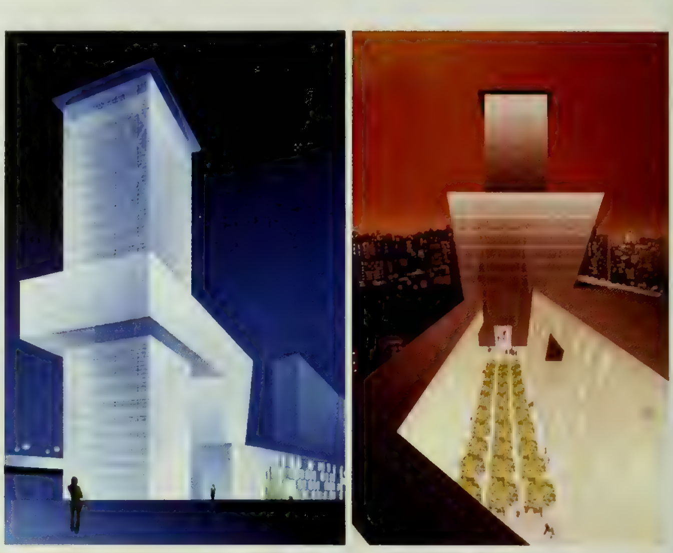
Tadao Ando creating bold design center for Shanghai



The project will be a departure from Ando's traditional low, concrete structures. A courtyard will be surrounded by galleries and a restaurant (right).

To commemorate the 100th anniversary of its founding, Tongji University in Shanghai will establish the Shanghai Design Center. The facility, which will be the first of its kind in China, will serve as both a research center and exhibition venue for architecture and design. It is being designed by the Japanese architect Tadao Ando.

Scheduled to open in late 2007, the Shanghai Design Center represents a departure from Ando's trademark Zen-like Minimalism and his sensuous use of concrete.

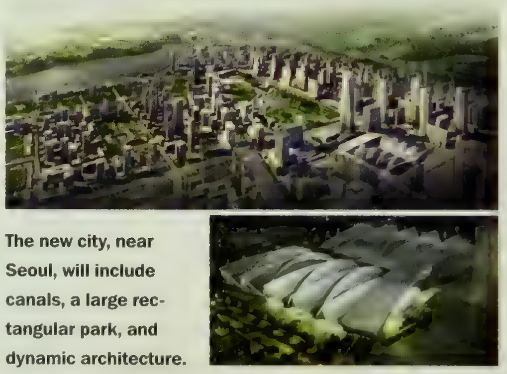
The project consists of two major buildings: a 25-story tower containing exhibition rooms, offices, and studio space for design companies and local design professionals, and a four-story structure to the south, which will help frame a courtyard surrounded by galleries, show rooms, and restaurants. The courtyard will act as a central public space for the center, serving as a venue for public events. Ando designed the tower as a "powerful symbolic shape" and conceived of the whole project "as a building [that] captures the city of Shanghai as it is, powerful and dynamic, without yielding to the enormous energy that the city radiates." His design shows a group of striking, angular blocks clad in glass curtain wall.

Designing a tall building is a relatively new challenge for Ando, who is best known for spiritual buildings, museums, and cultural facilities that are usually low-to-the-ground and often placed in picturesque natural settings.

"In every project, I seek to stimulate the place through its connection to diverse things such as the city, history, society, and nature," notes Ando. "At times, the aim is to uncover the memory of place retained by the site and make it manifest through architecture," adds the architect.

Ando's commission in Shanghai points to his increasingly international stature. Before winning the Pritzker Prize in 1995, he worked mostly in his native Japan. But today, he is not only realizing work elsewhere in Asia, but also in Europe and the Americas. His Modern Art Museum in Fort Worth, Texas, opened to acclaim at the end of 2002, and he is currently designing a new wing for the Clark Art Institute in Massachusetts. He also just completed converting the Palazzo Grassi in Venice into a contemporary art museum for the Fondation François Pinault. *Daniel Elsea*

New city in Korea will utilize other cities' successful designs



The new city, near Seoul, will include canals, a large rectangular park, and dynamic architecture.

Korea is about to implement an architectural and cultural experiment on a grand scale—a planned city.

The billion-dollar, 1,500-acre city of Songdo, built on landfill near Seoul, began in the mid-1990s. It was recently revitalized when the International Monetary Fund passed legislation allowing foreign real estate investment in Incheon, a district that includes the future Songdo. The hope is that Songdo will serve as an international trade hub.

Historically, planned cities have not lived up to expectations as vital centers of commerce. But several key factors make Sogndo's start auspicious. The Korean government has created a Free Economic Zone for the area, and there is growing financial support from international governments and private investors. The Gale Company, a leading U.S. real estate company, and Korea-based POSCO, the second-largest steel manufacturer in the world, are working together to develop the land.

Among incentives for investors are cheap land, which can be bought at 25 percent to 50 percent of fair market value, and lower taxes, which will be 17 percent lower than in nearby (and over-crowded) Seoul.

The developers selected Kohn Pedersen Fox (KPF) to be the master planner for the project. Its design works like a collage of other cities' successful features. The city will have a series of canals and utilize water taxis, like Venice. A long rectangular park like New York City's Central Park will be located in the center of the city with an adjacent museum. The hierarchy of space will be a radial sector like Vienna and Paris.

According to the plan, the greatest density of buildings will be in the city center, and gradually spread out like a tent, ending finally in a garden that surrounds the city. Congestion will be avoided by the relaxation of building density. Thirty percent of the development will be open space, which will allow for the overall site to be divided into rings of living space: pedestrian in the middle, green space at the edge, hospital and cultural centers on the outside. The site will function as a "fully diversified organic whole like an ocean liner," says James Von Klemperer, a principal at KPF.

Another goal of the plan, he adds, is to create a World's Fair of architectural building types by inviting other international designers to contribute to the new city. Inviting other architects will also prevent the city from becoming overplanned or too closely controlled. *Karen Lindskog*

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Integrated firms dominate architecture practice ranking

Just a fraction of U.S. architecture firms are truly large businesses. According to an American Institute of Architects Firms Survey, last conducted in 2003, sole-practitioner offices make up almost one-third of architecture practices. Firms with more than 100 seats make up just 2 percent.

Despite these demographics, RECORD thought its readers would be interested in which firms are the biggest of the big. As we did last year, we have ranked architectural practices on the basis of annual revenue using data gathered by our sister publication, *Engineering News-Record*, for its own Top 500 Design Firms list.

The chart below is somewhat different from our 2005 list of the largest architect-led firms [RECORD, July 2005, page 78]. Last year's table included only "pure" architecture firms or architecture-prime firms, and we ordered those firms on the basis of total design revenue. Therefore, firms were ranked on the basis of revenue generated not only from architecture, but also from services like engineering, planning, and construction.

By contrast, the 2006 list ranks firms on the basis of revenue derived from architectural services only. However, the table captures many integrated firms with sizable architecture practices. Several of these classify themselves principally as engineering companies.

Joann Gonchar, AIA

To participate in the *ENR* survey, which serves as the basis for this ranking, contact Virgilio Mendoza at (212) 904-6371, or virgilio_mendoza@mcgraw-hill.com. To view the ENR Top 500 Design Firms list, go to **www.enr.com**.

HOW TO USE THE TABLE

Companies are ranked according to revenue for architectural services performed in 2005 in $ millions. Firms that responded to *Engineering News-Record*'s annual Top Design Firms survey submitted these revenue figures. For an extended list see www.architecturalrecord.com/people/

Some markets may not add up to 100 percent due to the omission of other market categories, and rounding. The McGraw-Hill Companies publishes both ARCHITECTURAL RECORD and *ENR*.

Key to how firms classify themselves:
A = Architect **AE** = Architect-Engineer
P = Planner **AEC** = Architect-Engineer-Contractor
EA = Engineer-Architect *Other combinations possible*

General building: Commercial buildings, offices, stores, educational facilities, government buildings, medical facilities, hotels, apartments, housing, etc.
Manufacturing: Auto, electronic assembly, textile plants, etc.
Transportation: Airports, bridges, marine facilities, railroads, etc.

2006 LARGEST ARCHITECTURE PRACTICES

	FIRMS LISTED BY 2005 ARCHITECTURE REVENUES AS REPORTED TO *ENR* IN ITS TOP 500 DESIGN FIRMS SURVEY	FIRM TYPE	ARCHITECURE REV.		TOTAL REV.	GENERAL		
			TOTAL	INT'L	DESIGN	BLDG.	MANUF.	TRANSP.
1	**AECOM TECHNOLOGY CORP.**, Los Angeles, Calif.	EA	$407.4	$0	$2,588.0	21%	0%	46%
2	**GENSLER**, San Francisco, Calif.	A	$398.2	$35.1	$406.4	89%	0%	11%
3	**URS**, San Francisco, Calif.	EAC	$348.0	$56.0	$3,303.0	16%	3%	32%
4	**HOK**, St. Louis, Mo.	AE	$278.3	$90.3	$396.2	93%	0%	7%
5	**PERKINS+WILL**, Atlanta, Ga.	A	$182.8	$21.9	$182.8	100%	0%	0%
6	**SKIDMORE, OWINGS & MERRILL LLP**, New York, N.Y.	AE	$172.0	$81.0	$223.0	91%	0%	9%
7	**HDR**, Omaha, Neb.	EA	$139.3	$4.3	$670.3	20%	1%	44%
8	**HKS**, Inc., Dallas, Texas	AE	$133.4	$7.4	$219.8	100%	0%	0%
9	**RTKL ASSOCIATES INC.**, Baltimore, Md.	AE	$120.4	$32.5	$173.3	97%	0%	0%
10	**CALLISON**, Seattle, Wash.	A	$114.0	$31.0	$114.0	100%	0%	0%
11	**HEERY INTERNATIONAL INC.**, Atlanta, Ga.	AE	$109.5	$4.7	$130.9	92%	2%	6%
12	**LEO A DALY**, Omaha, Neb.	AE	$106.5	$1.7	$162.1	100%	0%	0%
13	**SMITHGROUP**, Detroit, Mich.	AE	$105.9	$1.0	$131.7	100%	0%	0%
14	**PERKINS EASTMAN ARCHITECTS**, New York, N.Y.	A	$91.0	$8.0	$91.0	100%	0%	0%
15	**CANNON DESIGN**, Grand Island, N.Y.	AE	$78.9	$8.4	$102.4	100%	0%	0%
16	**ZIMMER GUNSUL FRASCA PARTNERSHIP**, Portland, Ore.	AP	$77.2	$2.2	$84.0	92%	0%	0%
17	**KOHN PEDERSEN FOX ASSOCIATES**, New York, N.Y.	A	$68.0	$42.0	$88.0	85%	0%	15%
18	**HMC ARCHITECTS**, Ontario, Calif.	A	$64.0	$0	$64.0	100%	0%	0%
19	**HILLIER ARCHITECTURE**, Princeton, N.J.	A	$62.3	$4.3	$62.3	100%	0%	0%
20	**ARQUITECTONICA**, Miami, Fla.	A	$61.2	$18.9	$61.2	100%	0%	0%
21	**CORGAN ASSOCIATES**, Dallas, Texas	A	$58.3	$0.3	$62.4	44%	0%	44%
22	**BURT HILL**, Butler, Pa.	AE	$55.6	$6.9	$55.6	100%	0%	0%
23	**WIMBERLY ALLISON TONG & GOO**, Honolulu, Hawaii	A	$51.7	$34.3	$65.9	100%	0%	0%
24	**STV GROUP**, New York, N.Y.	EA	$50.6	$0	$215.9	17%	0%	83%
25	**GRESHAM, SMITH AND PARTNERS**, Nashville, Tenn.	AE	$49.3	$0.3	$90.5	52%	1%	29%

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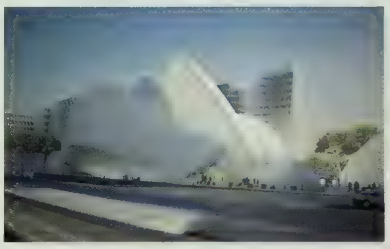
Fuksas designing urban complex in Marseilles

Massimiliano Fuksas has won the Marseilles-Euroméditerranée Development Agency's competition to design Euromed Center, a multipurpose urban complex in the Mediterranean port city of Marseilles, France.

Covering 18.5 acres, Euromed Center includes a park and pedestrian-only street, bordered by offices, retail space, a conference center, a movie theater multiplex, and a 210-room hotel. The $364 million project, located in the dockside redevelopment area of La Joliette, is not intended to be "an isolated and introverted block next to the city, but a real urban generator," says Fuksas.


This exhibition structure is part of the plan.

The project also has "a poetic dimension," he says. Its design brings to mind sailing ships, harbor quays, and marine life. A series of folded structures beside the park is planned to provide a sheltered area for public exhibitions. Influencing the design was the surrounding urban fabric's "layering and complexity," says Fuksas.

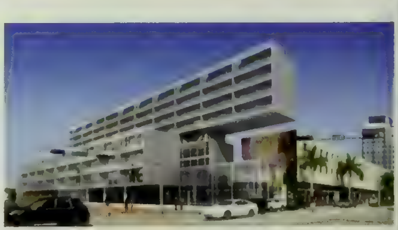
Fuksas joins other architects, notably Zaha Hadid, whose design for shipping company CMA CGM's high-rise headquarters won over a selection panel last year, in the $3.7 billion, 15-year urban renewal scheme of Marseilles. Construction on the $380 million project is set to be completed by 2009. *Robert Such*

Norten in South Beach

Mexican architect Enrique Norten of Ten Arquitectos has designed a $70 million mixed-use development called Lincoln East, which will be located next to Miami Beach's popular Lincoln Road pedestrian promenade.

The project, the first contemporary building on Lincoln Road, is part of Lincoln East Development Group's efforts to restore the eastern section of Morris Lapidus's Lincoln Road Mall. Norten's concrete, steel-and-glass structure will be woven into the shopping area's historic context. BEA International Architects are architects of record for the project.

The building will have a dramatic 54-foot-long cantilever and will include about 150 residential units ranging from 800 to 1200 square feet. The project will also include 10,000 square feet of retail space, 500 parking spaces, and a rooftop pool.


The building will have a 54-foot-long cantilever.

Glenn Boyer, director of development for Lincoln East Development, points to a wealth of architecture on the road, including Frank Gehry's New World Symphony Theater, Norten's new development, and the restoration of Lapidus's mall. He says the area will become the "cultural and architectural center of Miami Beach." Norton was recently chosen to design the Guggenheim Museum branch in Guadalajara, Mexico [RECORD, July 2005, page 28]. *Jennifer LeClaire*

News Briefs

New street furniture for New York The New York City Department of Transportation recently signed a contract ordering thousands of bus shelters, newsstands, and public toilets designed by Grimshaw Industrial Design, a division of London-based Nicholas Grimshaw and Partners, produced for the Spanish company, Cemusa. The deal is worth about $1 billion. The line includes 3,300 bus shelters, 330 newsstands, and 20 automatic toilets, all made of stainless steel, anodized aluminum, and tempered glass.

"Working in New York, you are able to achieve a greater economy of scale with a large production run," says Duncan Jackson, head of industrial design for Grimshaw. "We're able to work with better materials and have stronger quality controls."

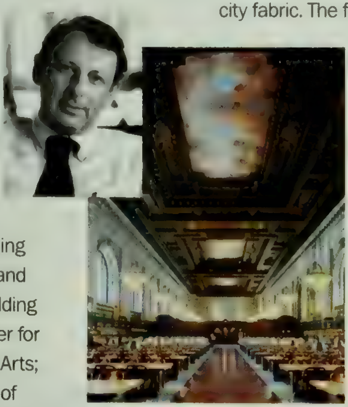
The new structures balance robustness with lightness, such as in the bus shelter, which has a cantilevered design with just 2 feet on the ground, thanks to a large plate anchored underneath the pavement. The firm eliminated painted finishes and plastics, which are less durable over the long term. According to Jackson, the goal is to have a "neutral impact regardless of the site," a welcome relief for New York's cluttered streetscapes. *Alan G. Brake*

New bathrooms and newstands.

Architect Lew Davis dies Architect Lewis Davis, FAIA, passed away on May 21 at the Mount Sinai Medical Center in New York City. He was 80. Together with Samuel Brody, Davis cofounded the Manhattan firm known today as Davis Brody Bond.

Davis's firm is well regarded for its contributions to New York City, including the Samuel B. and David Rose Building at Lincoln Center for the Performing Arts; the restoration of several spaces inside the New York Public Library's main branch; and an addition to the Harvard Club of New York. The firm is the associate architect for the World Trade Center Memorial, and the design architect for the Memorial Museum.

The firm initially gained prominence by redefining subsidized housing in the 1960s and '70s. Appalled by the formulaic public projects that segregated residents in sterile apartment towers cut off from the surrounding neighborhood, Davis and his associates proposed ways to integrate affordable housing into the city fabric. The firm's first opportunity to realize its vision was Riverbend, a 628-unit, state-funded housing development on a triangular plot in Harlem. Waterside, a rental housing project, followed in 1974. In the 1980s, after funding for subsidized housing all but disappeared, private sector projects took center stage. Davis's firm, then known as Davis, Brody & Associates, won the AIA's Architecture Firm Award in 1975. Davis also received the Thomas Jefferson Award for Public Architecture and the American Institute of Arts and Letters Arnold W. Brunner Prize. *Naomi Pollock*



Davis (left), and the renovation of the NYPL Reading Room.

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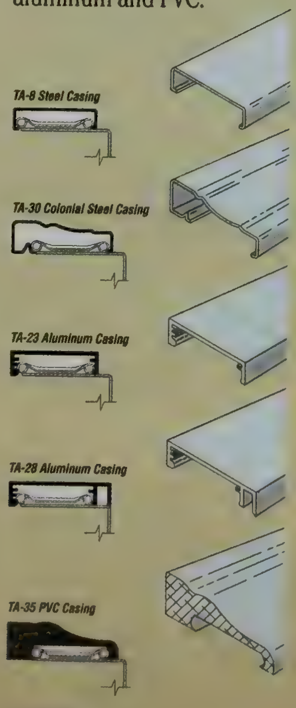

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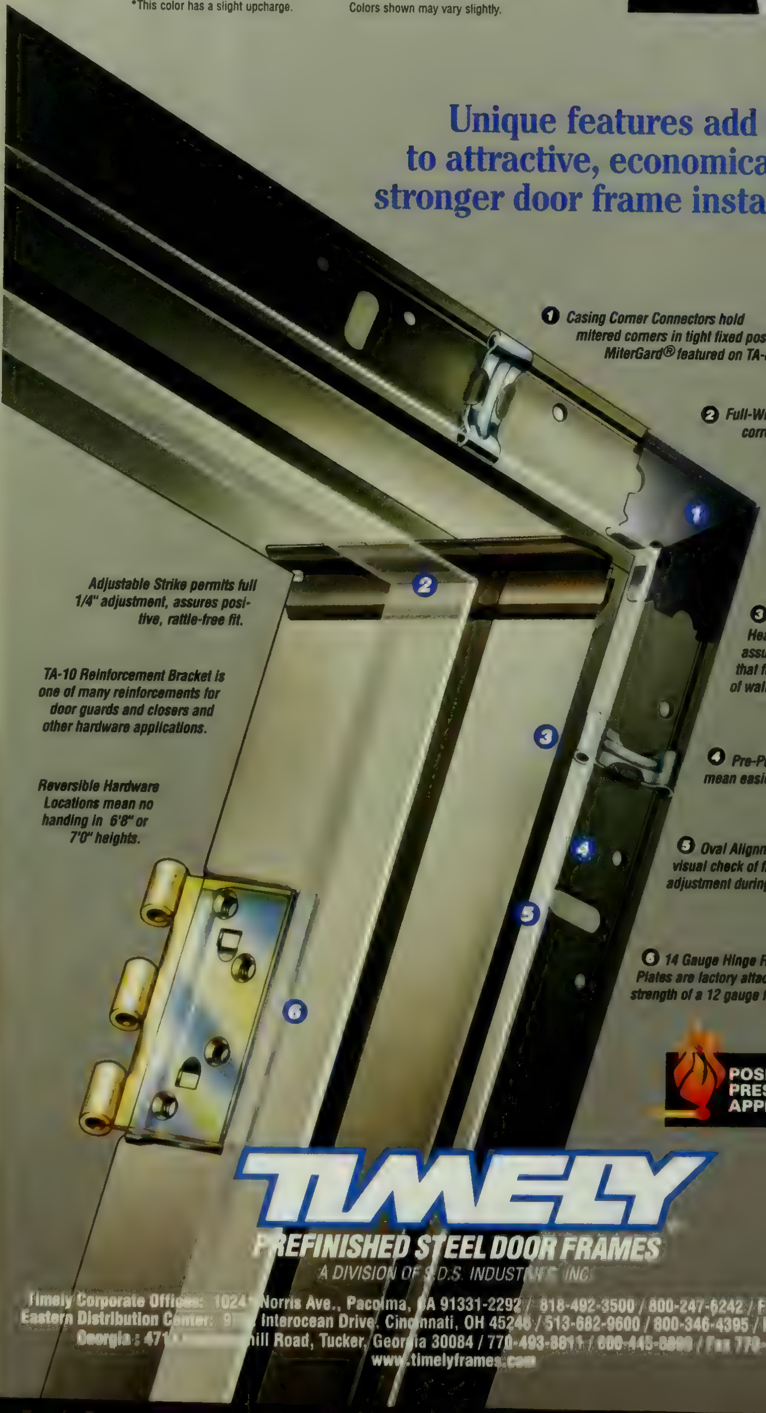

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Design

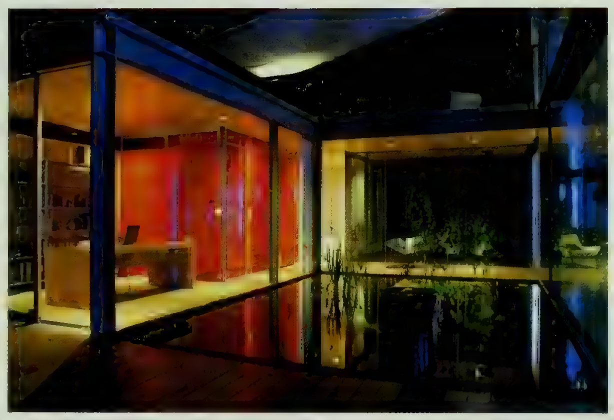
Bercy Chen Studio: Seeing through and beyond

It seems strange that two very international young architects would find Austin, Texas, to be the right place to practice architecture, but Thomas Bercy and Calvin Chen (top left and center, respectively), partners in Bercy Chen Studio, have found the capital of Texas to be neutral ground for their particular approach to the craft.

Bercy grew up in Belgium and Chen in Taiwan and Australia. The two met while attending the University of Texas at Austin, where both received degrees in architecture (Bercy also has an engineering degree). "Austin couldn't be any more opposite a place as where we're both from," says Bercy. Chen agrees. "Because it's so different from either Brussels or Taipei, where space is so rare and precious, Texas is a good place bring in our influences and start from scratch in a place with room to do that. We have a third approach to architecture, neither Modern nor Postmodern."

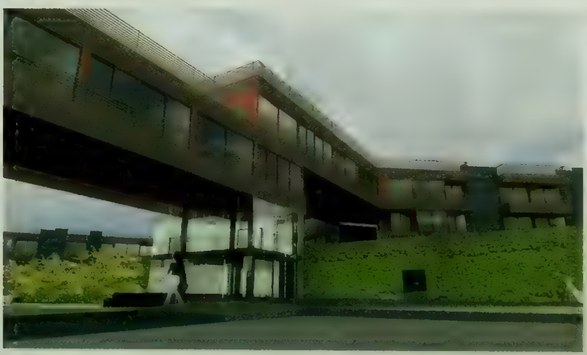
Taking projects from schematics to construction, the six-person firm has billed itself as a design-build studio since it began in 2001. "We found that we could accomplish more interesting things with small budgets if we just did them ourselves," says Bercy. According to the architects, simple touches like incorporating a clear plastic pipe into the ceiling of a house to introduce a visible water element and display part of a rainwater-collection system confused contractors, who came back with an exorbitant price to follow through. "The pipe was just clear instead of opaque," says Bercy, "and it's those sorts of small things that we find we can complete without having to explain to someone else."

Completing several residences in and around Austin has given Bercy Chen Studio a reputation as innovative architects willing to give clients more than the expected, even if the materials they use are ordinary. Chen and Bercy admittedly reference the architecture of Asia, Europe, North Africa, and South America in their work, but they also bring a sensitivity to the immediate environment to their projects. "Designing in a hot climate like Austin, we try to incorporate water features as much as possible," says Bercy.



Annie Residence, Austin, Texas, 2003

This 2,000-square-foot home for two related families was separated into two pavilions connected by a glass corridor, with a central reflecting pool between the two volumes. Each pavilion contains a central service core clad in red or blue acrylic panels over a metal frame.



Skybridge Apartments, Austin, Texas (ongoing)

A 120-unit town-house development, Skybridge's two- and three-bedroom units will surround a park. The project includes a clubhouse, fitness center, basketball and volleyball courts, a pool, and outdoor amphitheater. The first and second stories will be interrupted to allow for views and circulation.

Beverley Skyline Residence, Austin, Texas, 2004

An extensive remodel of a 3,500-square-foot 1970s home, this project entailed reconnecting the house to the steep topography of its site
using windows as a frame for
expansive hill-country views.
was also used to seemingly diss
corners and as railings for deck

Reflecting pools, common in Taiwan or North Africa, often find their way into the firm's designs. "We like the reflective quality of surfaces like water," he says. "Surfaces such as glass, acrylic, water—it reminds us of the roof gardens in Casablanca or Marrakesh. And it literally cools the space."

Reflective surfaces; connections with the site, such as using architecture as a frame for outside views; and the concept of "borrowed landscape" are a few of the design tools that Bercy Chen Studio applies to create unique spaces. "We love the idea of situating a building so that it frames a view through and beyond," says Chen, describing how architecture can create private areas that look beyond a confined space. "It's layering and an awareness of the environment," he says.

While Bercy Chen Studio continues to explore its craft, the world seems to be more aware of the firm. It was one of New York's Architectural League Emerging Voices in 2006 and has been commissioned to create both a 120-unit condo complex and a spa retreat near Mexico City. "We know we'll have to make compromises to build commercial buildings," says Bercy, "but we'll continue to respond to the environment, take the essence of history, and make it new." *Ingrid Spencer*

For more photos and projects by Bercy Chen Studio, go to archrecord.com/archrecord2/.

Lago Vista Residence, Lago Vista, Texas, 2004

This vacation home has 900 square feet of interior space and 600 square feet of outdoor porch. A simple shed structure with a cantilevered roof, the house appears to float above the land because of its cantilevered concrete structure.

Work

Surviving internships takes planning—and mentors

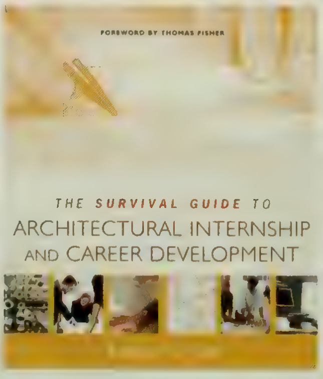
Schemata Workshop, from left: Peggy Heim; Mike Denlinger; Mike Mariano; Grace Kim.

Negotiating a fair salary and benefits is a thorny subject that many architecture interns would rather avoid—school leaves them largely unprepared for it, and woe is the person who seeks guidance from friends or coworkers. One young architect broached the compensation question on a Seattle-area listserv recently, says Grace Kim, AIA, and was admonished for straying too close to the "taboo" area of fees. What's an intern to do?

Kim, who was the first recipient of the American Institute of Architects' Emerging Professionals Mentor Award in 2004, says that compensation is among the top concerns she's encountered during the 13 years that she's been counseling architects. She's dealt with it so many times that writing her book, ***The Survival Guide to Architectural Internship and Career Development***, published this spring by John Wiley, flowed like a stream of consciousness, she says.

Tackling compensation, Kim advises interns to value themselves more highly: In some respects, recent graduates have an edge on established professionals. "They're coming out of school knowing new technologies like Building Information Modeling," she explains. "That's a knowledge base that we would have to pay a lot of money to learn."

While Kim's book is mainly aimed at students and first- or second-year interns, it contains something for every architect, including chapters on nontraditional career paths and how to start a practice. This is a topic that Kim knows well, since she wrote ***The Survival Guide*** while she and her husband, Mike Mariano, were founding their own Seattle-based firm, called Schemata Workshop.


FOREWORD BY THOMAS FISHER
THE SURVIVAL GUIDE TO
ARCHITECTURAL INTERNSHIP AND CAREER DEVELOPMENT

For those who don't have time to read the book, Kim's vocational advice is twofold: Younger architects, in particular, should set career goals and revisit them regularly, and everyone should seek the counsel of multiple mentors. The benefits of mentoring run both ways. "I get a lot back when I do it," Kim explains. "Sometimes it's just personal satisfaction, which is plenty, but other things also come of it, whether it's job leads or meeting people I wouldn't have normally met."

Giving is something of a way of life for Kim and Mariano. Their practice participates in the "1% Solution," a program that encourages architects to work pro bono for nonprofits and other needy community groups. And, in a case of practicing what they preach when it comes to designing pedestrian-friendly environments, the couple refuses to own a car—opting, instead, to share one through a system called Flexcar.

While the 37-year-old Kim has no regrets about her career, she admits, ironically, that she wishes she'd completed her Intern Development Program requirements faster. Her delay wasn't a result of bad mentoring, Kim observes, but was due to her lack of a larger career plan: something she hopes that ***The Survival Guide*** will encourage young architects to take seriously. *James Murdock*

For an excerpt from Grace Kim's book *The Survival Guide to Architectural Internship and Career Development*, visit archrecord.com/archrecord2/.

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Guilt by association: political expression and architecture

Critique

By Michael Sorkin

I felt a certain disquiet at ARCHITECTURAL RECORD's recent coverage of the Richard Rogers flap [April 2006, page 33]. As the magazine reported, Rogers was threatened with the loss of two giant commissions in New York—the $1.7 billion expansion of the Jacob K. Javits Convention Center and the $1 billion Silvercup Studios project (sound stages, offices, and apartments on the Queens waterfront)—for his (guilt by) association with Architects and Planners for Justice in Palestine (APJP), a small British organization that had its first meeting in Rogers' London office in early February.

Convened by his old friend architect Abe Hayeem, the group (around 60 people, many of them Jewish and Israeli) agreed on the following statement of principles: "We share the international condemnation of the continuing annexation and fragmentation of Palestinian land through the expansion of illegal settlements and outposts and the construction of the Separation Wall in defiance of international law. We hold all design and construction professionals involved in projects that appropriate land and natural resources from Palestinian territory to be complicit in social, political, and economic oppression, and to be in violation of their professional ethics."

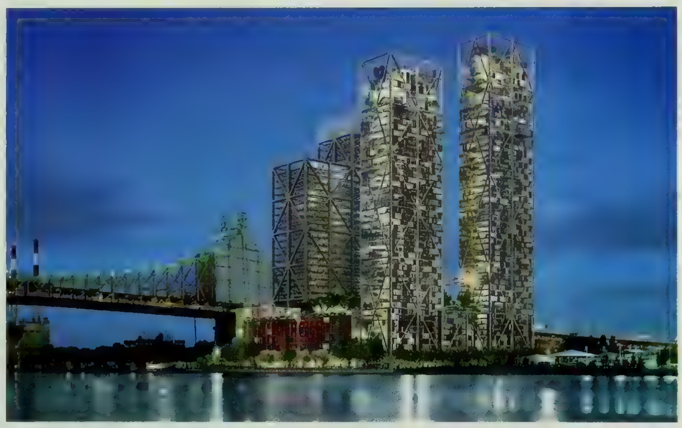
Contributing editor Michael Sorkin is the director of the graduate program in urban design at the City College of New York and the principal of Michael Sorkin Studio in New York.

Boycotts as a tool

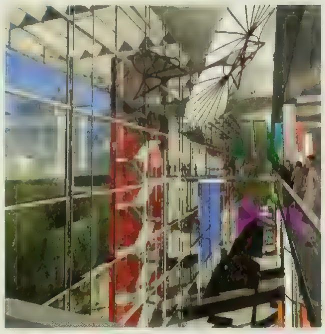
Although it has not yet adopted a specific course of action, APJP has been discussing a variety of targeted moves—including boycotts—aimed at the design and construction communities. Boycotts—embargoes or sanctions, as they're called when governments apply them, as the U.S. currently does against the Palestinian Authority (also embargoed by Israel) and Cuba, among others—are a widespread and often effective means of political expression. Most of us have probably participated in a boycott at one time or another, forgoing trips to apartheid South Africa, eschewing grapes on behalf of California farm workers, or skipping Dixie Chicks concerts in support of Bush. The risk in the tactic is that the brush can be too broad, leading to unanticipated downside consequences; there was, for example, much discussion during the South Africa boycott of its potential economic effects on ordinary people.

In the case of Israel, such actions are especially fraught. For years, the country was the object of an Arab boycott that extended to companies doing business with it. The craven acquiescence of many American corporations in this ban is a sorry, if scarcely unusual, chapter in the history of big-business ethics and one of the reasons that legislation was passed in the 1970s to stop such collusion in assaulting Israel's fundamental right to exist. And it is true that disproportionate opprobrium is directed at Israel by groups and media that take far less interest in the behavior of other regimes in the area—which include some of the vilest on the planet. A current attempt to organize a general academic boycott of Israel by British academics is being resisted both for being undiscriminating in its target and an affront to academic freedom, feelings I share. (I find Israel's repeated closing of Palestinian universities repugnant for similar reasons.) None of this, however, contravenes either the right or the duty of people of conscience to act against injustice via nonviolent, democratic means, including boycotts.

Although the idea of some form of directed boycott was simply



One of the projects caught up in the controversy over Rogers's political activities is a $1 billion mixed-use complex for Silvercup Studios in Queens that will include apartment towers, an office tower, retail, and video studios.



Rogers was hired to design a $1.7 billion expansion of the Javits Convention Center (above).

discussed by the APJP, it was enough to generate a chorus of outraged calls from New York officials, including State Assembly Speaker Sheldon Silver, Comptroller Alan Hevesi, and New York Congressman (and recent mayoral candidate) Anthony Wiener, among others, to dismiss Rogers from the Javits Center job and withdraw tax credits from Silvercup should Rogers continue as its architect. At the same time, he was hastily summoned to New York by his client, Charles Gargano, chair of the Empire State Development Corporation, to account for himself. The reason offered in public for this extraordinary step was that Rogers, by hosting the meeting of APJP, had supported an "illegal" economic boycott of Israel. Lurking behind this charge was a much uglier one, the thinly veiled suggestion that Rogers, by lending his weight to "bigoted" criticism of Israeli policy, was anti-Semitic, an especially pathetic accusation given the fact that Rogers's Jewish father was forced to flee fascist Italy to escape persecution and that his wife is Jewish.

In the third paragraph of the RECORD story, several names—including mine—are listed as belonging to the suspect "group." Although I have not attended any meetings or paid any dues, I have been in regular contact with Hayeem, a British Iraqi Jew who lived some years in both South Africa and Israel before settling in London. Hayeem and Rogers have a history of shared activism and had campaigned together against apartheid, advocating the widely supported boycott (perhaps the origin of the reflexive assumption that Rogers was simply at it again). If sympathy can be conflated with membership, then I am clearly a "member" (no cards have yet been issued to be carried). APJP is an affinity group, and I have deep affinity with its point of view, which is neither unusual nor extreme: The route of the separation barrier has been declared illegal by the International Court of Justice and the United Nations, among other bodies. These are positions I've expressed in a book, *Against the Wall*, published last year. Still, seeing my name in print as a member of a group considered so dangerous that having anything to do with it would disqualify an architect from public projects in New York, gave me a chill, and I began to hear faint echoes of certain phrases in my mind's ear. "I have in my hand a list of names … Are you now or have you ever been …?"

Museum of Tolerance

And not for the first time. The issue of RECORD covering the Rogers matter also contained an item about the Frank Gehry–designed Museum of Tolerance in Jerusalem [April 2006, page 43], which reported that the project's construction had been delayed because of the discovery of graves during the excavation of the site, part of an ancient Muslim cemetery. I had written skeptically about what I felt were the museum's hypocritical politics in this column some time ago [June 2004, page 117] and was vehemently attacked in a subsequent issue [August 2004, page 67] by the project's sponsor, who said my position "reeks of McCarthyism" for wondering about Gehry's thoughts on the undertaking. He claimed that I was proposing a political litmus test as a precondition for selecting an architect. Of course, this smear entirely missed the point. I was not asking about Frank Gehry's politics in general nor his opinion on any matter unrelated to the meaning of that particular building—a project that embodied, I thought, a deeply problematic message.

The difference in the two situations is fundamental. Rogers's commissions are not in Israel or Palestine but in New York City, and the two projects have nothing to do with Middle Eastern politics, nor has anyone suggested that Rogers has in any way attempted to politicize them. Rogers has been subjected to an obscene piling-on by grandstanding local politicians—playing to New York's "sixth borough"—who have attempted to disqualify him from the two jobs for his alleged connection to positions that have absolutely no relevance to the work, save the shabby accusation that the man for whom the convention center is named, the late Senator Jacob Javits, a strong supporter of Israel (and, one might add, of the First Amendment) would have been affronted.

Where does the logic of this witch hunt stop? Will everyone in Rogers's office be obliged to sign an oath? How about the contractor? The caterer? This chain of phantom associations is the very essence of McCarthyism.

It is also part of an increasingly pervasive assault on free expression and association in the city. Performances at a local theater of a play about the young American peace activist Rachel Corrie—who was crushed in 2003 by an Israeli bulldozer while attempting to defend a Palestinian house from demolition—have been canceled under pressure. The Freedom Museum and Drawing Center have been banished from the reconstruction of Ground Zero out of fear that, in the exercise of their expressive rights, these institutions might sometime in the future support articulations offensive to our self-proclaimed guardians of political correctness. Such actions are more worthy of the Taliban than American democracy. And the growing fortification and surveillance of both public and private realms—whether through ubiquitous security cameras, unwarranted wiretaps, or the insane bollardization of the cityscape—represent a dramatic and growing threat to the freedoms of association and assembly that are the main expressions of a democratic polity in physical space.

First Law of Architecture

To save his commissions, Rogers, admired by many both for his remarkable buildings and his previously forthright politics, launched into a monumental grovel, orchestrated by New York master flack Howard Rubenstein, whose defense of Rogers (referred to in press releases as "Architect"—never "Lord"—Rogers) included publicizing the tidbit that he had honeymooned in Israel with his first wife and trumpeting his readiness to accept commissions there. Rogers immediately denounced the group he had recently hosted ("I am not now nor have I ever been a member"), declared himself against boycotts "of any kind" (never mind his vocal support of the anti-apartheid boycott), called a press conference to denounce Hamas, offered his ringing support for the separation barrier, and generally did what it took to obey H.H. Richardson's famous First Law of Architecture: get the job. While there may be no shame in saying what one must to escape an inquisition, Richard Rogers had the power and prestige to stand up to it, and his lightning cave-in has bolstered the enemies of free speech. Rogers isn't quite in the Elia Kazan league—though he did "give up" the APJP—but the disgrace is real.

Good career move, though. Rogers has just been hired by Larry Silverstein to design one of the new office buildings at Ground Zero. It should generate enormous fees and will offer excellent views of the Freedom Tower. ■

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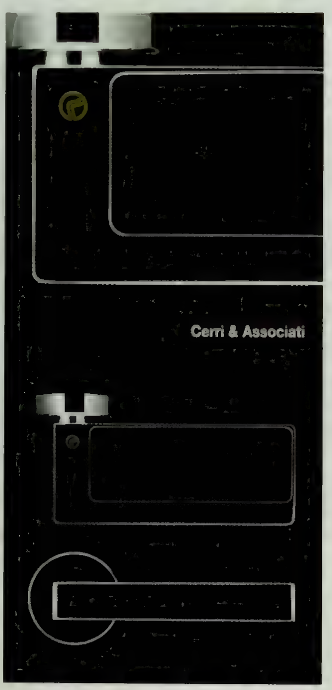

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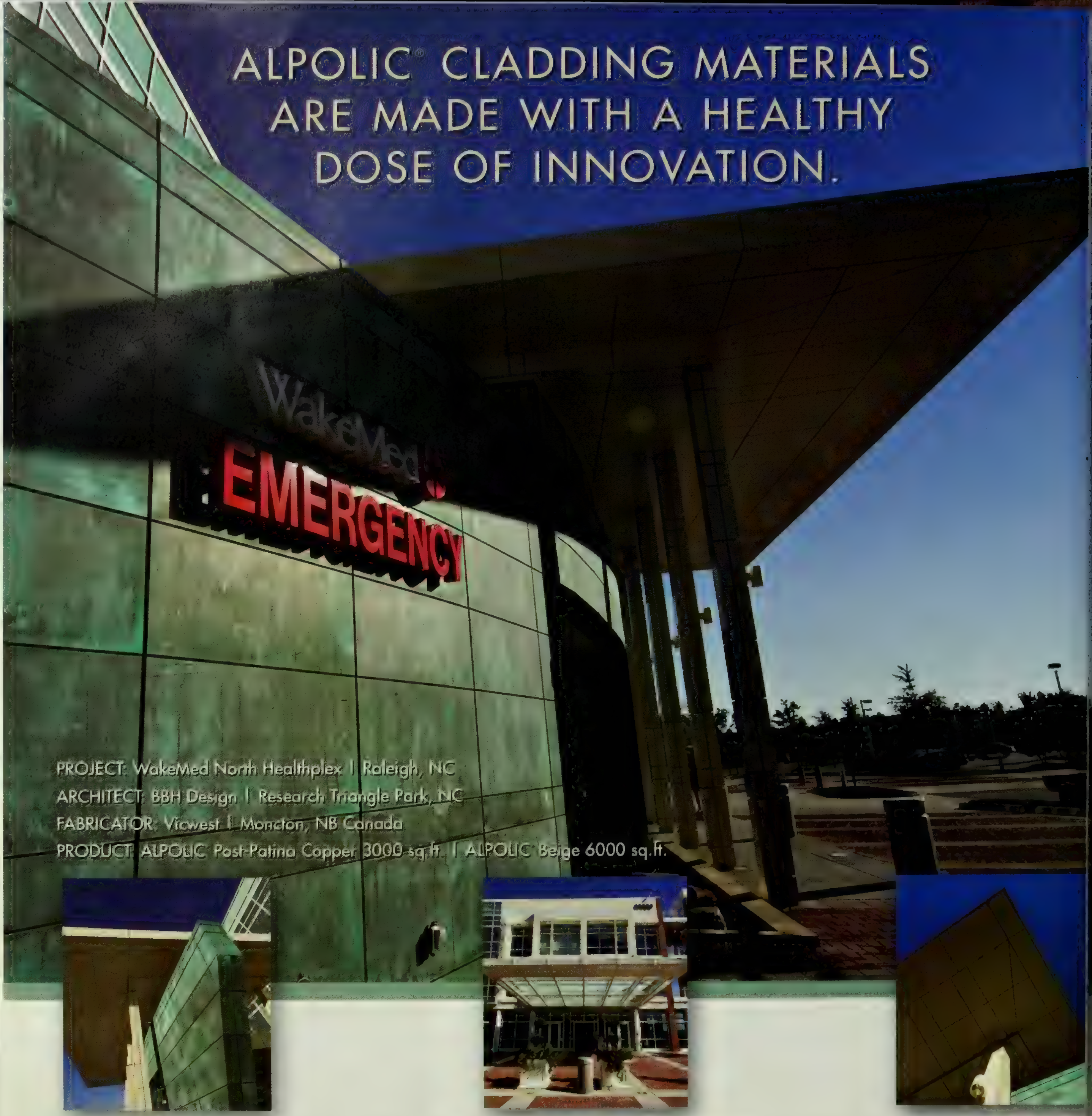
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Besides Mendes da Rocha: What the younger São Paulo architects are up to

Correspondent's File

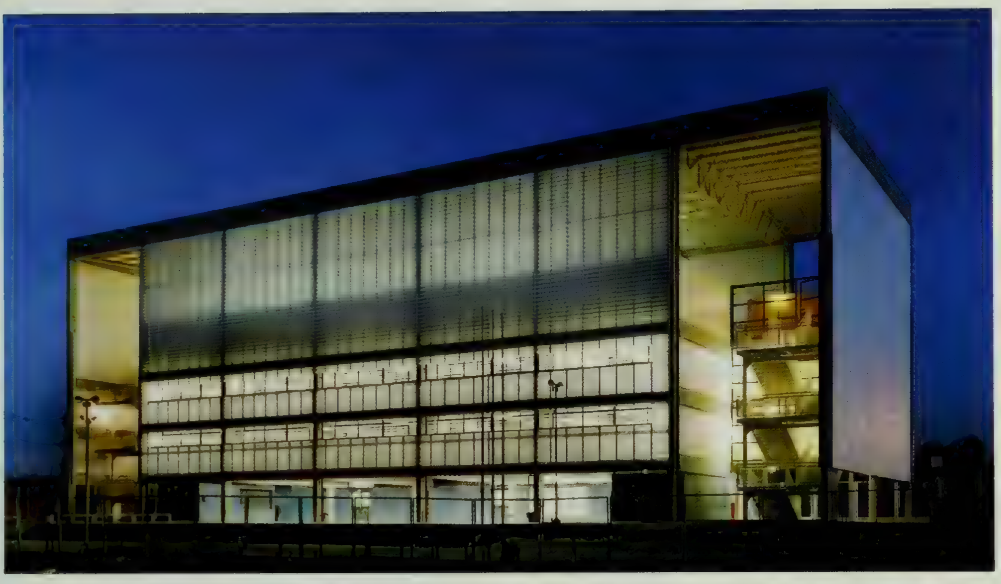
By David Morton

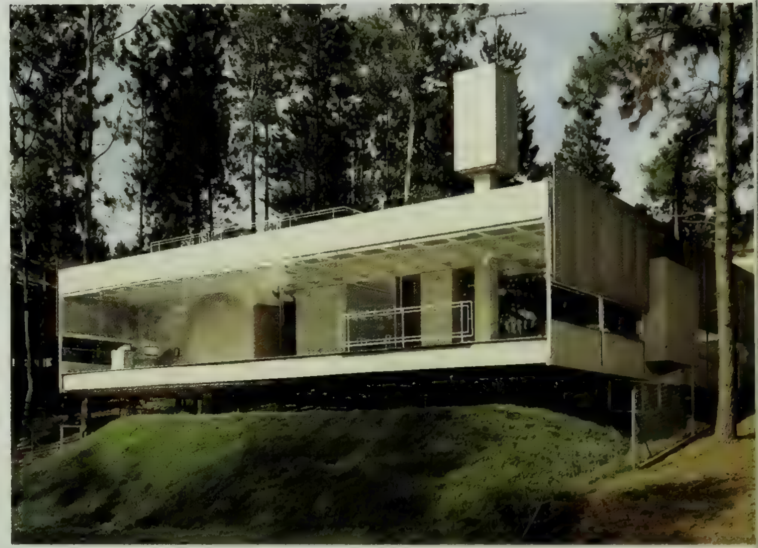
In April, Brazilian architect Paulo Mendes da Rocha, long renowned in his homeland for the delicacy and technical elegance of his Brutalist architecture, was awarded the Pritzker Prize for Architecture. But one of the most common responses to the award, outside of excitement, was bewilderment. Who *was* this guy? Why did he win the biggest prize of all? Others saw an excellent architect who had worked outside of the international star system finally getting his due. Either way, his name was now common knowledge.

Mendes da Rocha has been the leading figure of the São Paulo, or Paulista, school of architecture for many years. But for about the past decade, a younger generation of Paulistas has been scoring achievements of its own. Many of them were Mendes da Rocha's students at the University of São Paulo, and now they are his frequent collaborators. Rarely do they work solo; they group themselves n teams, to form offices located within 5 minutes of each other near he Praça da Republica.

As with his own projects, Mendes da Rocha doesn't like to comment on his colleagues' work; he friendships are too close. Yet he affinities are obvious. The Paulistas seek honesty in materials, and that usually means lots of unfinished concrete. They favor monumentality, even at a domestic scale. They admire an economy of means and technical simplicity over computer-aided theatrics. For instance, the 2002 Mariante House (right), designed by São Paulo firm MMBB, is just two square, reinforced-concrete slabs, each 2,825 square feet, supported on four concrete pillars. The glass panels have no frames. Prefab components, such as the thin concrete-and-wood panels above the glass, are used when possible. The structure is nearly naked. "Once the concrete does what you want it to do, there's no reason to dress it up," says Angelo Bucci, formerly with MMBB, and now with the firm SPBR.

The Paulistas profess a distaste for mere formalism, when architecture is "only about language, where everything's a game," says Luciano Margotto, an architect with Núcleo de Arquitetura. "It costs a lot." For some reason, Frank Gehry





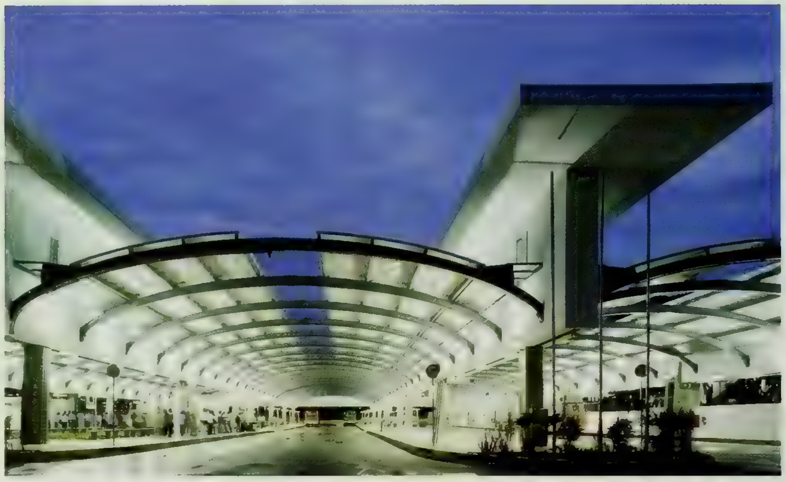
Una Arquitetos' FDE Public School (top) replaced an ineffective facility with a luminous, open-feeling one. MMBB's Mariante House (above) employs concrete as a delicate, non-load-bearing element.

David Morton is a Washington, D.C.–based freelance writer who conribues regularly to RECORD.

is a favorite target for criticism, while the Rio de Janeiro arch formalist Oscar Niemeyer receives the Paulista seal of approval. The Paulistas are conflicted: contemptuous of what they see as gratuitous trickery, but wide-eyed admirers of the grand gesture. When a technical solution offers the opportunity for showmanship, they'll take it.

Designs: residential, educational, transportation

A good example of such bold structural showmanship on a residential scale is the Morato House in São Roque on the outskirts of São Paulo, by the firm Andrade Morettin. It sits on a natural amphitheater of land facing a luxuriant forest. The main body of the house is a concrete box projecting over a smaller box. In the initial design, a wall of the larger box cut off views from the master bedroom to the northeast. So the architects removed a section of the wall and used a steel brace to bolster the structure. Instead of minimizing this imposition on the purity of the box, Vinicius Andrade and Marcelo Morettin decided to enhance the visual contrast of the "strange object," as they cheerily call it. They made the brace brawny and exposed—without interrupting the view—and they painted it red.


The roof of Nucleo de Arquitetura's Lapa Bus Terminal expels exhaust while filtering sun.

Another project is the aforementioned Mariante House, which glows with serenity, technical finesse, and modern elegance. Yet, according to Bucci, one of the building's designers, its roots can be traced back at least 40 years, to the residence of Mendes da Rocha himself. In the Mariante House, one sees Mendes da Rocha's massing, and the same use of concrete as a delicate, non-load-bearing element—so delicate in some instances that it appears no thicker than the glass panels just below it.

For a recent pilot program, the state of São Paulo called on several Paulista firms—MMBBA, SPBR, Andrade Morettin, and UNA Arquitetos—to build schools. The 2003 commission played to the architects' strengths, providing them with a kit of prefab concrete parts and instructing them to assemble buildings on the cheap in otherwise nondescript housing projects in Campinas, a city in the state's interior. The new buildings were supposed to feel like they belonged to the commu-

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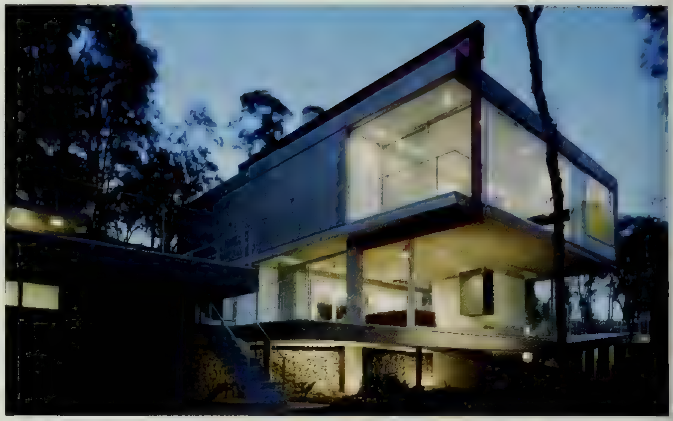
nities where they were built—not imposed, like the bunker-style schools the government usually turns out.

The previous schools shut out the community with thick walls that not only closed off students but even stopped local residents from getting to nearby community centers. In the new facilities, this will not be a problem, since all the architects made the ground floors nearly completely open to public access. The project by UNA is particularly loud about its inclusiveness. Its open, four-story stairwells function as billboard-size welcoming signals.

The late João Batista Vilanova Artigas, the first of the Paulistas, said that architecture ought to confront reality with a critical attitude, and the reality of São Paulo doesn't allow for small statements. If the schools in Campinas tower over the neighborhoods where they are built, it is because the neighborhoods will otherwise have no distinctive identity. Behind the Paulista project is a sense that the metropolitan region around São Paulo is fundamentally broken, unsound, inequitable, but that an architect, with some heavy lifting, can help change that.

Although such commissions are rare, it's the big projects that really unleash the Paulista instincts for muscular intervention. Specifically, that means the suspension of great masses over voids. At the 71,000-square-foot Lapa Bus Terminal, completed in 2003, Núcleo de Arquitetura raised four huge concrete beams onto relatively slender pillars. This maneuver left the pedestrian level an open, uncluttered field, while above, a dramatic interplay of heavy beams alternating with delicate vaults of glass occurs. The roof, which echoes the look of a trolley shed previously on the site, was designed to expel bus exhaust while filtering the strong Brazilian sun. Light bounces off the white beams before reaching the waiting areas.



The central portion of Andrade Morettin Arquitetos' Morato House in São Roque is a concrete box projecting over a smaller box.

Mendes da Rocha himself offers little guidance in describing the movement he leads. He resists any firm definition of the Paulistas or what they are trying to achieve. "Everything is in motion," he says. The response is itself typical Paulista—emblematic of an unwillingness to be labeled for wider consumption, and a not-so-subtle disdain for the simplifications of critics and magazines. Mendes da Rocha's younger colleagues were ecstatic that their mentor was rewarded the Pritzker, but as for the attention it might grab for their own work, they were studiously indifferent. "At the moment, this is not the point," says MMBB's Fernando de Mello Franco. ■

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Zaha Hadid's retrospective summers at the Guggenheim

Exhibitions

By Russell Fortmeyer

Zaha Hadid. *Curated by Germano Celant and Monica Ramirez-Montagut. At the Solomon R. Guggenheim Museum, New York, through October 25, 2006.*

After feting Frank Gehry with a retrospective in 2001, the Guggenheim Museum in New York City has turned its sights on another Pritzker Prize–winning celebrity architect, Zaha Hadid. She joins the exclusive company of Gehry and Frank Lloyd Wright, among the few, if not the only, architects ever given solo exhibitions at the museum.

Hadid's retrospective, which opened on June 2 with an installation by the architect, chaotically fills the museum's spiraling atrium galleries (as well as an accompanying catalog) with a comprehensive overview of her 30-year career thus far, presented through early paintings and drawings, models, photographs, renderings, products, and videos of interviews and projects. Like all retrospectives, the staggering quantity of output is the point, with no larger ambition or justification persuasively established. It's not the architect's first time at the museum—she designed the installation for the Guggenheim's 1992 exhibition of Russian and Soviet avant-garde art, which included her still-unrealized proposal to reconstitute in the museum's atrium a model of Vladimir Tatlin's *Monument to the Third International*.

After the first few galleries, which afford a rare opportunity to

The Guggenheim's atrium, with its ramp displaying the work of Zaha Hadid.

Not just "any" symposium at the Guggenheim

Coinciding with the opening of the Zaha Hadid retrospective at the Guggenheim Museum in New York, *Log* magazine editor Cynthia Davidson hosted an architecture symposium featuring an array of architects, theorists, and critics. Calling it "Contamination: Impure Architecture," Davidson cautioned the audience not to confuse the symposium with the *Any* magazine conferences she had staged in the 1990s, but rather to see it as an opportunity to discuss the global state of architecture and its influences. There seemed to be some confusion as to whether the symposium was about contamination or Hadid, herself a presenter in the second half of the day-long event.

Among the participants in the sold-out event were architects Hadid, Greg Lynn, Peter Eisenman, Kunle Adeyemi, and Farshid Moussavi, as well as theorist Sanford Kwinter and film production designer Alex McDowell. While most of the presentations reviewed each practitioner's oeuvre, which left little time for concluding discussion among the panelists, a few architects attempted to address larger issues. Lynn, in particular, underscored the fact that so many architects are building prolifically when public recognition of architecture is at an all-time high, despite the profession's lack of serious internal dialogue. One need only venture outside the Guggenheim long enough to see the scaffolding and cranes putting up banal buildings citywide to get his point. *R.F.*

Exhibitions

The installation includes many models, but stops short of engaging the Guggenheim atrium in a spatial dialogue.

see the abstract, stealthlike paintings that brought Hadid her much-deserved early acclaim, the show confusingly devolves as it spirals up into a mishmash lacking any unified organizational strategy or clear distinctions between built and unbuilt work. While architecture cognoscenti may have no difficulty sorting through the projects, it's hard to imagine how the half of the show on the upper levels will be anything other than baffling to most visitors.

The painting galleries include Hadid's work dating from the late 1970s to the 1990s, all generously hung to allow for a full appreciation of the theoretical foundations of her career. The chief highlight is *The Peak*, the landmark, skewed-perspective paintings and drawings undertaken in 1982 and 1983 for a hotel on a steep slope in Hong Kong. *The Peak*, endlessly published and discussed over the years, remains arguably one of the most significant series of architectural renderings, if not paintings, produced in the past 50 years. Aspects of it materialize in Hadid's other paintings—as well as later buildings—with her signature angular striations, warped tectonics, and multiperspectival spaces.

But after you've seen the hand-drawn and painted renderings, opportunities for any unified appraisal of her work diminish. The arrangement of the models, drawings, and photographs becomes progressively jumbled and chronologically displaced; models for a single project may appear on one ramp, with drawings on another. This retrospective suffers a "kitchen sink" affliction frequent in architecture exhibitions—architects work with models, and therefore flaunt as many as possible. The result is a claustrophobic arrangement, where the excess of models incites a quickened pace that produces a general state of confusion as these maquettes become reduced to scale-challenged objects scattered in dead-end traps along the ramp edge.

If the incredible quantity of artifacts on display attests to anything, it's the ongoing prodigious output of Hadid's firm, with projects in various stages of concept, design, and construction throughout the world. Included here are large models and supporting documents for her most recent, high-profile built work, including the Phaeno Science Center in Wolfsburg, Germany [RECORD, February 2006, page 70] and the BMW Plant Central Building in Leipzig [RECORD, August 2005, page 82], as well as examples of her product design, such as a tea service, the three-wheel Z-Car, furniture, lighting, and a gorgeously sensuous set of all-in-one kitchen utility units formed out of white Corian.

Hadid's first well-known built project, the 1993 Vitra Fire Station in Weil am Rhein, Germany, is featured in the show and remains a bellwether for the architect, if not necessarily one of her best-constructed designs. Vitra represents a translation of the twisted field conditions of her paintings, which owe a genealogical nod to Piet Mondrian and Kazimir Malevich (and the whole of Russian Suprematism), into a fixed set of elements coalescing around a new idea of space. The fire house's solid concrete and soaring metal components—disjointed and seemingly interrupted only by their own internal logic—transcended the contemporary discipline's fixation on either Postmodern style games or inane theoretical posturing, mapping a new way that has evolved into a seemingly theory-free expressionism, now wildly popular in the public imagination. What is less well known, however, is that the building now functions only as a furniture gallery.

While Hadid's firm has a number of projects currently in construction, including the Guangzhou Opera House, in China, and the Maxxi National Centre of Contemporary Arts, in Rome, not to mention forays into large-scale urban planning, photographs of some of the built work harshly demonstrate the difficulty in preserving a high level of perfection while expanding an office's output. One need only look closely at the photographs of Phaeno to see concrete finish work that suffered in translation from design to building. This condition is hardly unique to Hadid, but the exhibition throws into relief the vast divide between painting—with its controlled surface, formal and technical limitations, and unique history—and building, an undertaking for which she has to rely on subcontracted labor. How her new endeavors will benefit from these past experiences remains to be seen, especially in the rapid, untested waters of Guangzhou, China.

Finally, and perhaps most disappointing, this retrospective's installation in no way responds to the Guggenheim's key feature—Frank Lloyd Wright's atrium. (Interestingly, harking back to Hadid's Tatlin proposal of 1992, she includes here an unbuilt project called Z-Wave, for which she envisioned swoopy forms melting off the ramp balustrades into the atrium, transforming slick surfaces into a marshmallow of warped space.) While cost was no doubt an issue, the show certainly lost the opportunity for one of the profession's best form-makers to respond directly to this celebrated space and for the curators to energize an otherwise conventional, model/drawing/photograph architecture show.

In light of the museum's reputation for self-promotion and at-times questionable curatorial motivation, it is noteworthy that at a press conference on June 2, neither Guggenheim Foundation director Thomas Krens nor the architect would elaborate, aside from coy gestures, on any plans fo a Hadid-designed Guggenheim project. On June 3, however, at an all-day symposium, she did show images of her unrealized proposal for a Guggenheim in Singapore an let on that the globally ambitious museum might offer future opportunities for collaboration. ■

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Cheeky words from architects both in and outside the modern fold

Books

Get Off of My Cloud: Wolf D. Prix, Coop Himmelb(l)au Texts 1968–2005, *edited by Martina Kandeler-Fritsch and Thomas Kramer. Stuttgart: Hatje Cantz Publishers, 2006, 528 pages, $50.*

We live in conservative times, but our traditional institutions and even our governments revel in radical architecture. Take Coop Himmelb(l)au: Founded in 1968 in Vienna, it still has a reputation as a firm of iconoclastic artistes, yet it has recently won major international commissions. Among them is the Akron Art Museum, set to open next spring; the European Central Bank in Munich, to open in 2010; and the Central Los Angeles Area High School #9, due to be finished in 2007. And in this first collection of his lectures, interviews, and project discussions, cofounder Wolf D. Prix's ideas and language are often militant and brazen.

Then there's the defiant title, *Get Off My Cloud*, from a Rolling Stones' song, described by Mick Jagger as "a stop-bugging-me, post-teenage-alienation song." You'd think the title alone would discomfort the commissioning classes. During their youth, Prix and his partner Helmut Swiczinsky listened obsessively to rock music and looked to the creative autonomy and collective conscience of groups like the Stones when shaping their firm. More important, perhaps, is the role of clouds in the firm's mythology. Their Web site opens with the words, "Coop Himmelb(l)au is not a color, but an idea of creating architecture with fantasy, as variable and buoyant as clouds." Prix writes, "Clouds are symbols for rapidly changing states. They form and transform themselves … Viewed in slow motion, the architecture of urban development could be compared to patches of clouds." The name Coop Himmelb(l)au translates from German as "Co-op Blue Sky." Drop out the "l," as the firm has by wrapping it in parentheses, and you have Himmelbau, or "sky build."

Two themes reveal themselves in the book's texts, presented chronologically. One is a plea to stamp out complacency in architecture, especially in Prix's home country, which, he says, "urgently needs a unique sign of high-quality, future-oriented architecture." Another speaks to the value of urbanity and urban life, which he describes as being "variable as clouds." He says his firm's work reflects "the variety and vivacity, tension, and complexity of our cities."

Prix divides his book into what he calls programmatic texts, project texts, lectures, interviews, and a section called "On Friends and Foes." In each, he expresses himself clearly and without pretension or theory-babble. *Andrea Oppenheimer Dean*

Carlo Mollino: Architecture as Autobiography, *by Giovanni Brino. New York: Thames & Hudson, 2006, 176 pages, $45.*

The first words in this book are Mollino's: "Every work of art reveals its creator; an exact image and likeness of the person who made it …" During his lifetime, Mollino (1905–73) was an outsider among Modernists, refused alliance with any credo or group, and was largely ignored by the architectural establishment.

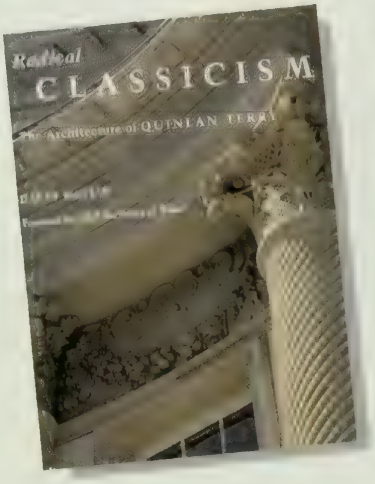
Death transformed Molino's reputation. The distinguished Italian critic and historian Bruno Zevi wrote a moving obituary in the popular weekly *L'Espresso*, organized the first retrospective of Mollino's work in 1982, and four years later fought to save his only surviving building, the 1947 cableway station and ski lodge at Lago Nero. Appropriately, a collage of writings by the impassioned Zevi, who had promised to write an introduction but died suddenly in 2000, forms the introduction to this book.

Zevi begins: "Carlo Mollino? A man surely in league with the Devil. When he opens his mouth and speaks, out come … razors, scimitars, and splinters of glass, but also enchanted gardens and monstrous flowers in colors nobody has ever seen." Like Zevi himself, Mollino was, in Zevi's words, "a heretic equipped with a creative courage that is intolerable for all conservatives."

Mollino's reemergence is mainly as a furniture designer, since only this work survives and has found its way into auction houses and galleries. The author says his book is a "warts-and-all critical view, the best and most respectful homage I can pay." His chapters are named for the "obsessions" that shaped Mollino's designs: flying, Alpine architecture and skiing, photography, theater design, fashion and frivolities, literature and decadence, the arts and the art world, inventions and patents, aesthetics and theory, teaching, the erotic, travels, the esoteric and occult, and—finally—architecture. *A.O.D.*

Radical Classicism: The Architecture of Quinlan Terry, *by David Watkin. New York: Rizzoli, 2006, 256 pages, $60.*

The one startling thing in this sumptuously detailed monograph on English architect Quinlan Terry is the



tone. Here's an architect who has won the $100,000 Richard H. Driehaus Prize for Classical Architecture, who designed the largest house built in Britain in 200 years, who redid the state rooms at 10 Downing Street, and who has no less exalted a personage than Prince Charles penning the forward. Yet the text presents Terry as a sort of lonely rebel battling, as HRH the Prince of Wales would have it, "the architectural mainstream, whose theory—Modernism—necessitates the ruthless negation of the past."

The prince's enthusiasm for Terry and his "sincere concern for the nature of beauty" is tepid compared to the heroic image conjured up by *Morality in Architecture* author David Watkin: "Terry's life and career have had to be a continuous and sometimes almost solitary battle against the architectural establishment," which Watkin later describes as "like the Taliban, a puritanical religion … [whose] most permanent enemy is the past." By contrast, we're told, Terry "understands the human joy in ornament that Modernism has outlawed."

To simply state the obvious, Terry has made a career out of catering to conservative tastes. Not that there's anything wrong with that: Such commercial buildings as his neo-Georgian office block on London's Baker Street have a refined depth that is likely to endure, and such country estates as Gloucester's Waverton House are wonderfully crafted. But this isn't radical; it's more of the same. And as long as there are clients who seek to put on airs, architects like Terry will do just fine. *John King*

Railway Stations: From the Gare de l'Est to Penn Station, *by Alessia Ferrarini, translated by Jeremy Scott. Milan: Electa, 2005, 220 pages, $50.*
The Stadium: Architecture for the New Global Culture, *by Rod Sheard, Robert Powell, and Patrick Bingham-Hall; introduction by Peter Cook. London: Periplus Editions, 2005. 208 pages, $45.*

Here are two handsome monographs devoted to grand structures of public accommodation. Railroad stations may be a moribund building type in the U.S., but they flourish in Europe and Asia, nourished by high-speed trains and high-density cultures that are less auto-dependent than ours. Stadiums, on the other hand, are proliferating globally in response to expanding demand for sporting events, fueled largely by television.

Railway Stations, by Alessia Ferrarini, opens with a fine but inadequately illustrated historical overview. Such important and visually stunning examples as Sant'Elia's 1913 design for Milan station and Rome's Stazione Termini cry out for photos.

Next, Ferrarini presents 16 stations in depth. Twelve are in six contiguous western European nations, and 13 were completed since 1990. But three are from the 1852–1935 period, including New York's Grand Central Terminal, a building that proves Classical eclecticism and seven underground levels of complex circulation can happily coexist.

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large numbers of people and railcars. Detailed plans, sections, and isometrics reveal these buildings' underlying organizational beauty.

Daylight is a recurring theme in these projects, a welcome holdover from the 19th-century need to illuminate and vent tracks and waiting areas naturally. New York's present Penn Station is perhaps the only major rail facility totally bereft of daylight, and the final chapter reveals a Skidmore, Owings & Merrill proposal to introduce a dramatic, glass light scoop there. Its elegance puts Santiago Calatrava to shame.

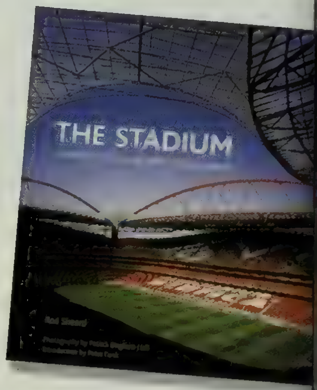
While *Railroad Stations* is visually sumptuous, Ferrarini's prose (or her translator's) is dry and academic, and the sans-serif type is small and faint, making the book a chore to read.

Miller Park, Milwaukee's baseball palace, should link these books nicely, since it's a stadium resembling an old railroad station. However, it's not in Sheard's book. The dust jacket flap suggests why: "Through the work of HOK Sport, the world's leading stadium architects, *The Stadium* examines the increased significance and value of the stadium as an architectural icon."

Miller Park isn't a HOK work, thus its absence. So *The Stadium* isn't actually a stadium monograph; it's a monograph on the work of one stadium firm, written by one of its principals. Nothing wrong with that, except that this key fact isn't mentioned within the book (except on the jacket). This is deft marketing: Rather than selling the firm itself, the book sells the building type that constitutes the firm's practice. As the industry's market-share leader, HOK can benefit from this approach while not seeming to toot its own horn.

If Ferrarini's writing is on the dry side, *The Stadium*'s errs in the opposite direction, saying, "Sport is the new Rock 'n' Roll," and is prone to such overstatements as "a stadium, more than any other building type in history, has the ability to shape a town or city," and "the best stadia are the true monuments of our time." The writing is also riddled with factual errors, such as placing Brooklyn's Ebbets Field in Boston, missing Yankee Stadium's opening date by four years, and dating the advent of televised sports more than a decade late.

Hyperbole aside, HOK Sport's body of work is immense, and usually of high quality. *The Stadium* documents 18 venues in depth, and six others in less detail. The photography and drawings are outstanding, and the seating plans have a special beauty. American readers will see that the firm's European and Asian work is more architecturally refined, structurally imaginative, and less nostalgic than its U.S. siblings. If you can get past the cheerleading, there's real architectural substance lurking in these pages. *John Pastier*



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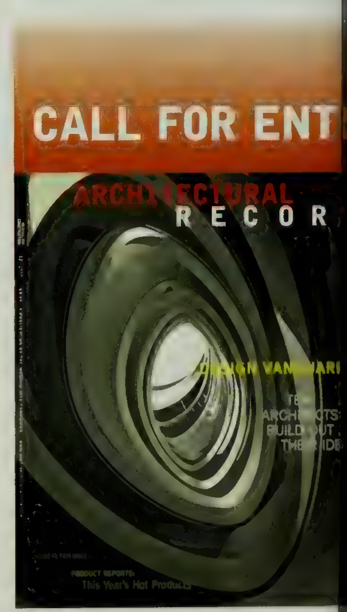

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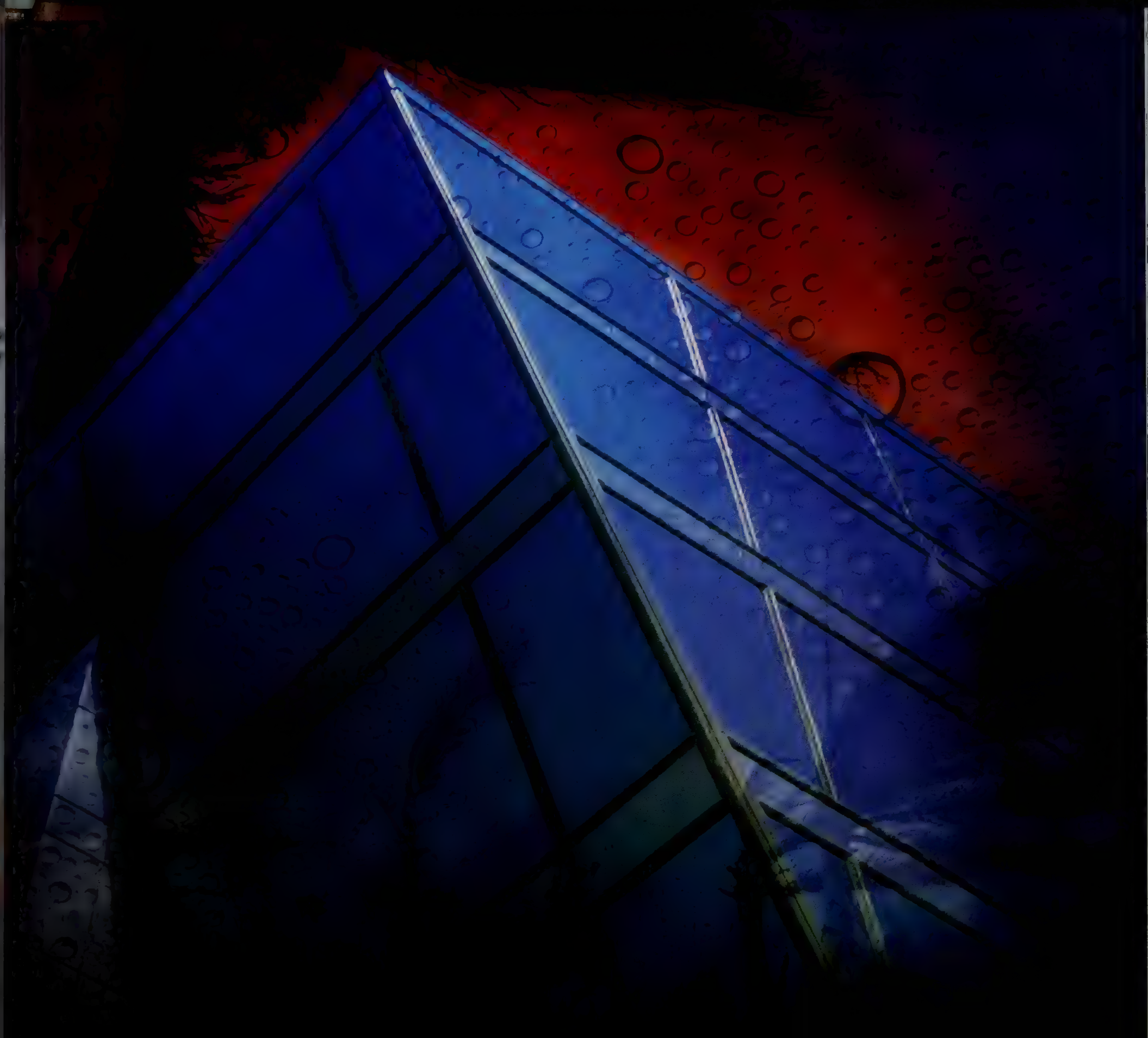

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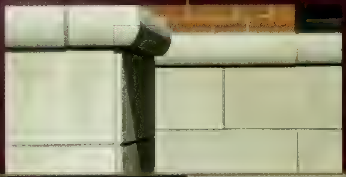

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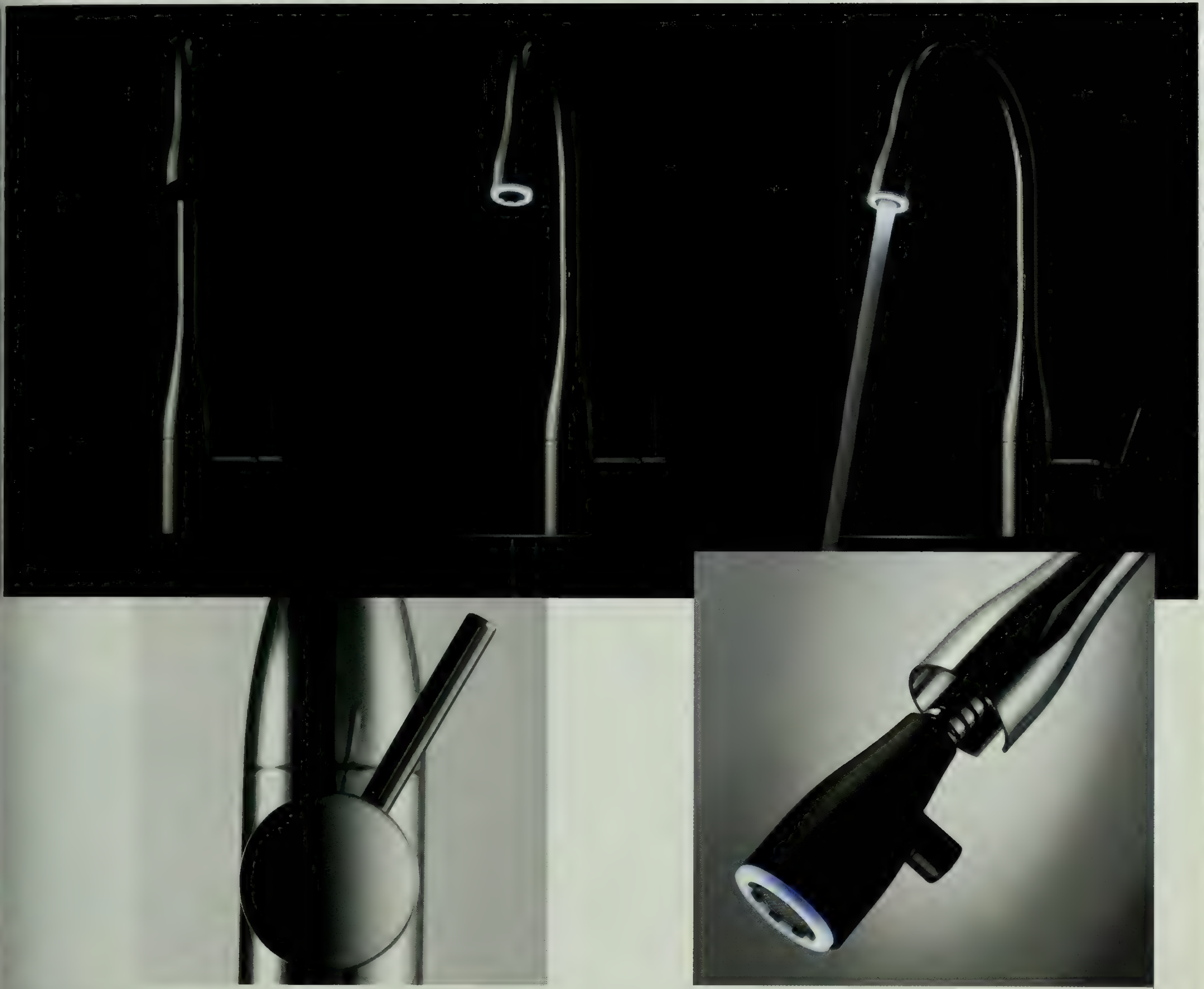
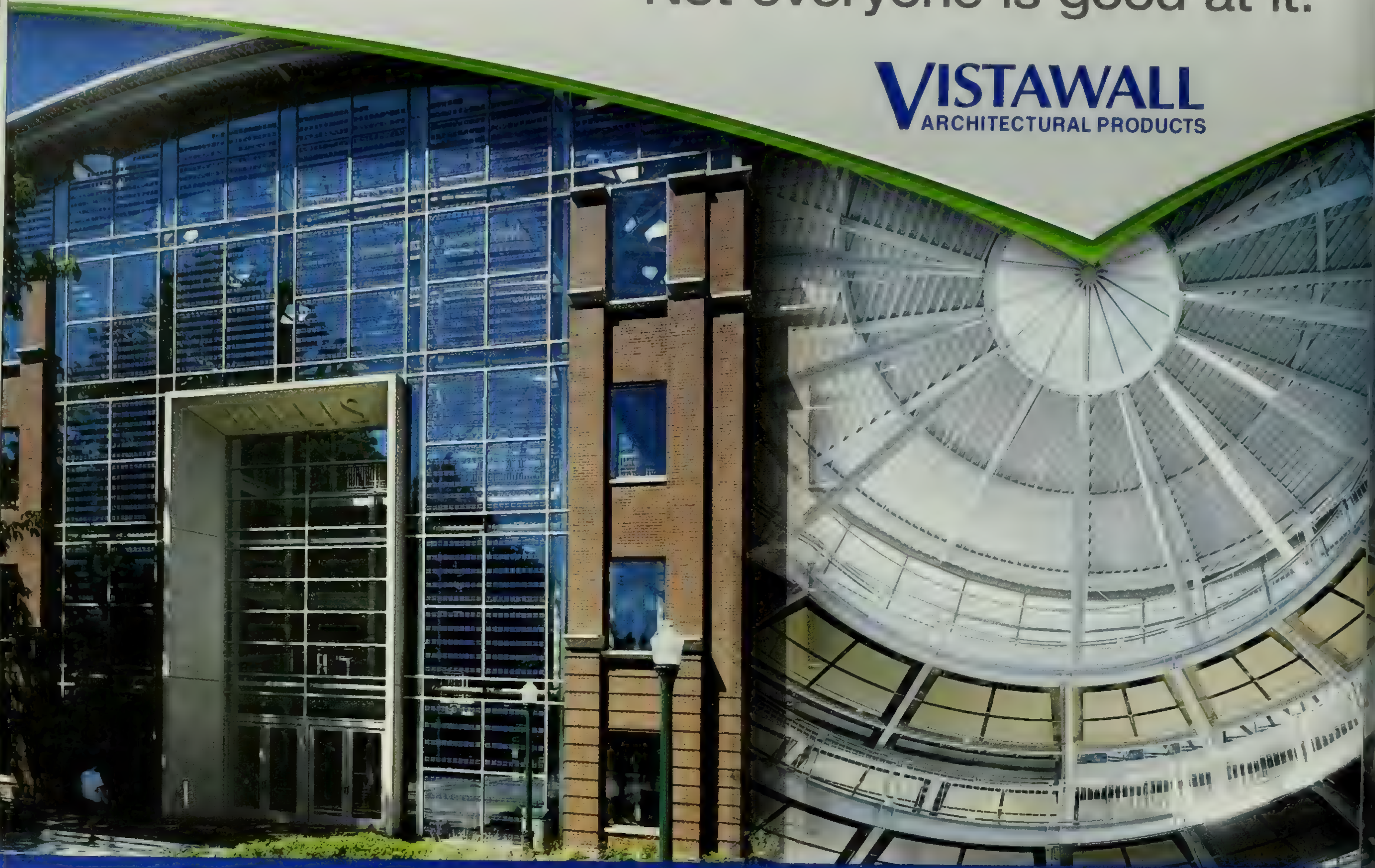


By Rita Catinella Orrell

LED lightband puts a faucet in the spotlight

Designer Michael Lammel's concept for KWC's Eve faucet emerged from a childhood memory of his grandmother washing vegetables from the garden. "She had thick glasses and couldn't see very well, and my sisters and I always had to search for dirt in our salad," recalls Lammel. Bringing illumination to the sink area, Eve integrates energy-saving LEDs into a transparent plastic ring within a pullout faucet that unexpectedly emerges from a slender swivel spout. Pushing a concealed button illuminates the lightband, which turns off automatically after 45 minutes. Later this year, a brighter version of the light is planned, along with colored lighting to indicate temperature. Eve is UL-listed and available in three sizes (with or without the lightband) in a chrome or stainless-steel finish. KWC America, Norcross, Ga. www.kwcamerica.com **CIRCLE 200**

Eve, shown off (top left); illuminated only (top center); and illuminated with running water (top right). A side view detail of the faucet handle (bottom left). The faucet has an elegantly designed pullout feature (bottom right).



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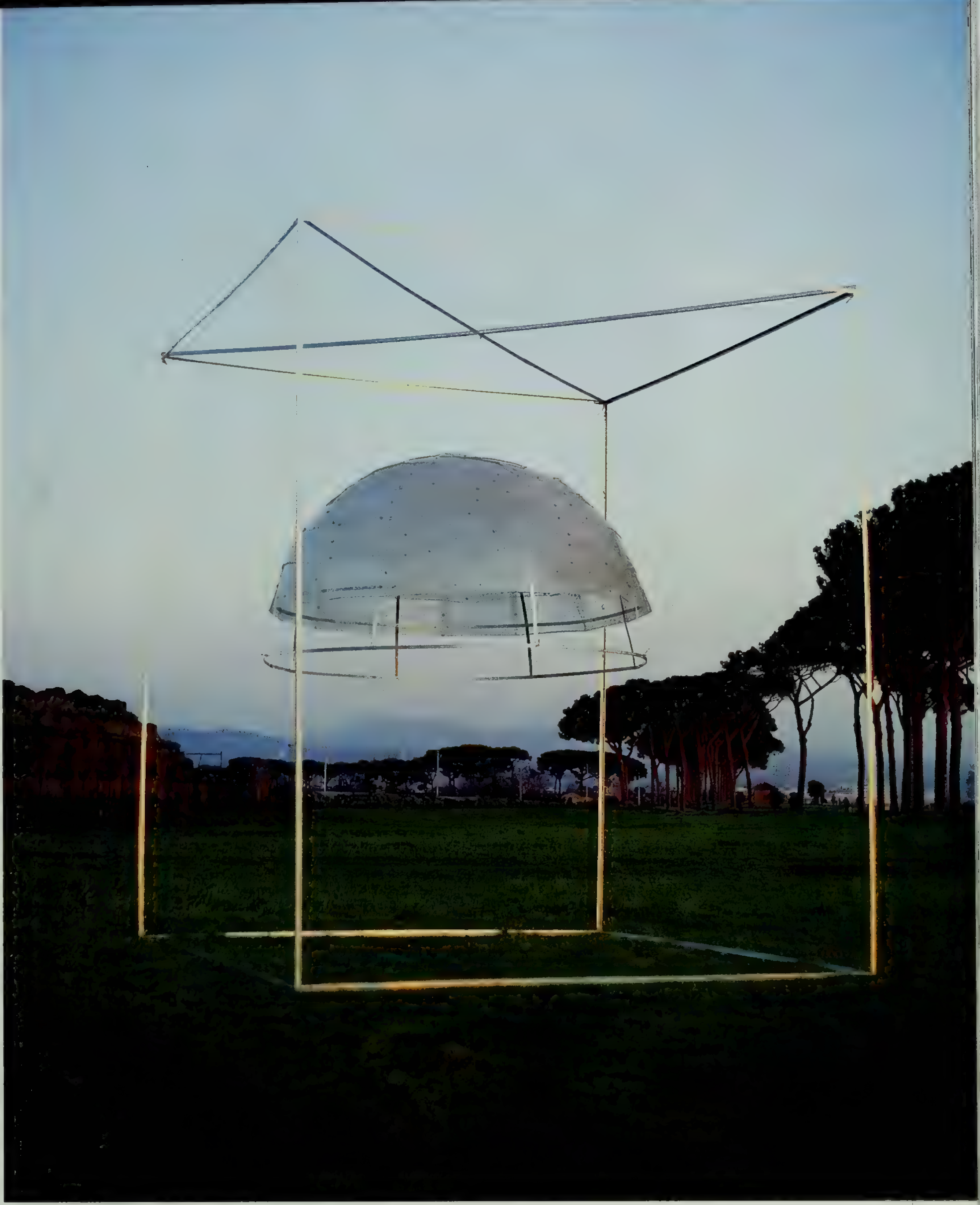


By Beth Broome

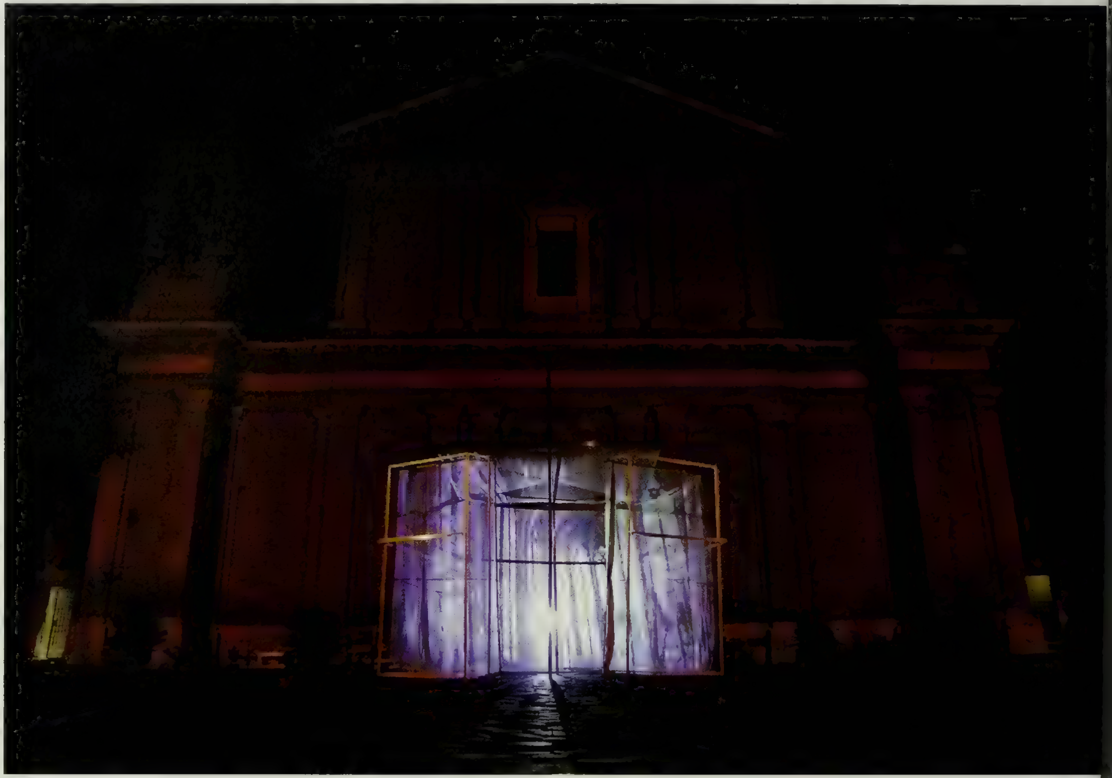
Finding religion in a shoe-box sanctuary

Against the backdrop of Rome's magnificent and enduring architecture, a collection of miniature portable prayer spaces has sprouted.

American architect Michael Herrman designed the Nomadic Prayer Spaces, which can be transported in a compact car and erected in less than an hour, to serve as an amalgamating force for the city's burgeoning and fractured migrant communities.

A Rome Prize fellowship in architecture at the American Academy brought Herrman to Rome to continue his research on the relationship between migration and architecture and the nontraditional ways transient populations use city spaces. Observing the impromptu Sunday gatherings of Romanians in parking lots, public squares, and the like underscored for the architect the powerful unifying force of religious activities for scattered communities and served as the genesis for this project.

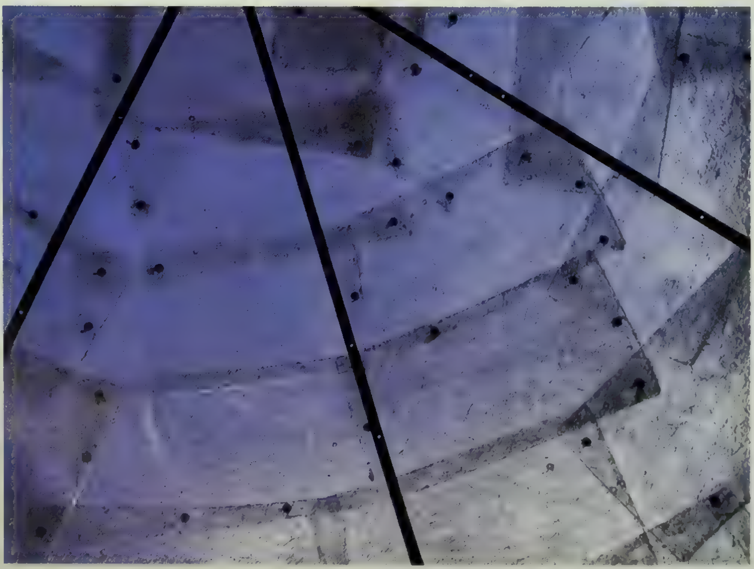
With a goal of preserving the gatherings' simplicity, visibility, and accessibility, Herrman set about creating a form



Prayer Space #2 at Parco Appia Antica (previous page). Illuminated Prayer Space #1 set in front of Sant'Anastasia basilica (right). A close-up of Prayer Space #2's resin and fiberglass panels (below).

that could be deployed as needed in various meeting places across the city, adapting to the particular requirements of site and population, and then removed. Lightweight and inexpensive, these sacred spaces would help the "congregation" demarcate a gathering area and protect them from the elements while remaining connected to the city around them. "There was something beautiful about the fact that the gatherings were outside," says Herrman. "I wanted to intervene as little as possible."

Nomadic Space #1 was constructed specifically for the Romanian community. In the tradition of Christian places of worship, the church is cruciform in shape, though as a twist, the form sits vertically. Made of interchangeable aluminum angle and T extrusions covered with a translucent stretchable-polyurethane high-strength fabric, the space, which can be illuminated with video projections by night, can adapt in size and form according to the community's needs. Longer or shorter angles can be substituted according to the number of congregants, and the arms of the cross can also open and close as needed. "I didn't want to make a space that imposed itself on the audience," says Herrman, "Instead, I wanted a space that responded to them."



Nomadic Space #2 evolved as other communities became interested in the project. Herrman responded with a space that was not linked to any specific religion. The size of the aluminum frame for Nomadic Space #2 is variable, and the flexibility of the flat aluminum extrusions suspended within the frame allows the users to create a form with the most meaning for them: the semicircular dome of a church, the flat dome of a mosque, an apse, or the rectilinear shape of a Buddhist temple. Handmade polyester resin and fiberglass panels (which can be illuminated) are bolted together in a chain formation and manipulated to fit the selected configuration.

There are currently three Nomadic Prayer Spaces scattered about Rome (with two more now in Paris). In parking lots or beside iconic buildings and ruins, newcomers to the city can be found assembling in these small shelters that have reduced the place of worship to its most basic elements, connecting the congregants to their origins while firmly rooting them in their new environment. ■

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See the Difference Quality Makes

Is there life after LMDC?

A talk with **Alex Garvin,** former head of planning and design for Ground Zero

As the vice president for planning, design, and development at the Lower Manhattan Development Corporation (LMDC) in 2002 and 2003, Alex Garvin had to juggle state and local politics and economics, plus deal with public emotion in the rebuilding of the World Trade Center site in Lower Manhattan. It was not an easy task, and, as is all too evident today, not an easily resolved situation. Although Garvin left a position that had placed him continually in the unremitting glare of the media spotlight, since then he has undertaken a number of other large redevelopment schemes and transformative urban plans. From 1996 to 2005, he was managing director of planning of NYC2012, New York City's committee for the 2012 Olympic bid. In 2004, his newly formed planning and consulting firm specializing in the public realm, Alex Garvin & Associates, produced a report for the Georgia office of the Trust for Public Land. It outlines a plan for creating Atlanta's Beltline Emerald Necklace, 23 miles of parks, trails, and transit that will link 46 Atlanta neighborhoods.

Garvin is author of American City: What Works, What Doesn't *(McGraw-Hill, 2002) and* Parks, Recreation, and Open Space: A 21st-Century Agenda *(American Planning Association, 2001). A lifelong New Yorker, Garvin served as both a New York City planning commissioner (1995–2004) and the city's deputy commissioner of housing (1974–78). He has taught urban planning and management at Yale as an adjunct professor for almost 40 years, and has been a consultant to the cities of Baton Rouge, Louisiana; Charlotte; Toronto; Pittsburgh; St. Louis; Stamford, Connecticut; Palm Beach, Florida; and Memphis.*

When Garvin recently talked with RECORD *editor in chief Robert Ivy and contributing editor Andrea Oppenheimer Dean, he reflected on trends that he believes are changing America's urban landscape, and on some of the results and lessons of his work for Atlanta's Beltline project, NYC2012, and the LMDC.*

ARCHITECTURAL RECORD: *We can't avoid beginning with the elephant in the living room in terms of your career—your work at Ground Zero, and specifically for the LMDC, where you were responsible for the design competition that led to the master plan by Daniel Libeskind. Today, everything seems to be in chaos there. Just as the Freedom Tower was finally breaking ground in June, the chairman of the Port Authority of New York and New Jersey, Anthony Coscia, announced that the tower would be in jeopardy if it couldn't attract at least a million square feet in leases by September. Could you foresee this mess?*

ALEX GARVIN: There has always been a problem with staging the development on the site, since the process depends so much on the real estate market. As the developer of the Freedom Tower, the Port Authority needs to be sure it has the leases. That's reasonable. But I have no idea if it can get them. You can't conjecture on the outcome of something like Ground Zero if you're not in the middle of it.

AR: *It doesn't look like that much is going on, though. Everything seems to be hitting the skids—the memorial may be redesigned and is over budget; the performing arts and museum spaces are floundering.*

AG: I'm disappointed that the cultural institutions are being slowly killed off. And the design of the Freedom Tower has changed; most recently it looks like a concrete bunker set back from the street. If that stays, it's appalling.

But look at what has happened down there. When I left, I hoped we would get a railroad station, and we will soon have one [the Transportation Hub], by [Santiago] Calatrava, at the World Trade Center site. I thought we could get Greenwich Street as a right of way, and that has happened. The damaged tower at 90 West Street, designed by Cass Gilbert in 1907, is moving ahead as a residential building, and Skidmore, Owings & Merrill's 7 WTC is finished. It seems that Larry Silverstein is now filling it. The retail plan for Fulton Street is proceeding, with RFQs sent out by the city's Economic Development Corporation. However, I do

> I AM DISAPPOINTED THAT THE CULTURAL INSTITUTIONS AT THE WTC SITE ARE BEING KILLED OFF.

find that it is awful that the Deutsche Bank on Liberty Street is still standing because no one can figure out how to tear down this particular heavily contaminated structure.

AR: *Would you ever consider returning to the LMDC? It still sounds like they could use some help down there.*

AG: No. I've started my own business—with six people in my office. But I would be willing to be hired as consultant.

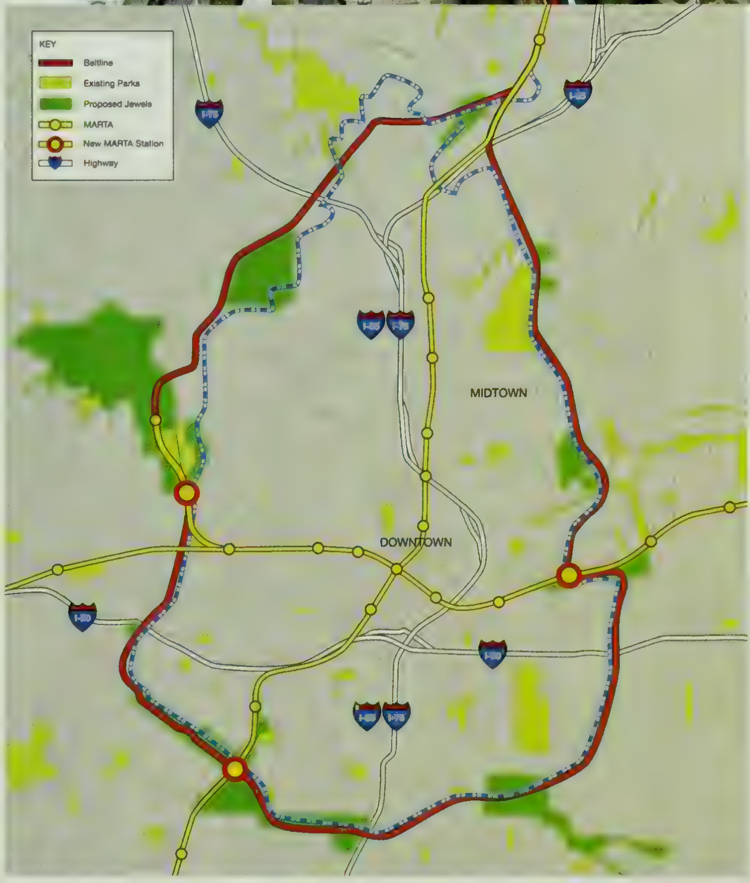
AR: *Your office has been attracting a lot of work that involves the public realm. Yet any discussion of the public realm in America usually concludes that it's become a lost cause. How do you find the situation?*

AG: There are several good signs. First, we have been reclaiming waterfronts for the public. This has been going on for a quarter century—everything from renovating the C&O Canal in Washington, D.C., to removing a highway along the Willamette River in Portland, Oregon, to creating the Tom McCall Waterfront Park there.

Furthermore, cities are increasingly investing in park systems, a practice abandoned during the last quarter of the 20th century. In New York, we added more than 1,400 acres during the years of the Giuliani administration [1993–2001] alone.

AR: *Has the move back to the cities by the middle class increased the reinvestment in public space?*

AG: This move back to the cities is the key issue needing attention in the 21st century. A growing part of our population consists of people over 50 for whom driving is not as convenient as walking—who find intensely packed, varied neighborhoods friendlier than suburbs. Also we have a growing population of younger singles who need to meet people. That's easy to do in cities. And when these people come, they come with money. Gentrification is bringing reinvestment and demand for public space. But gentrification also has terrible effects on people who can no longer afford to live in the neighborhoods where they work. That's a major issue of the future.



Garvin's proposal for the Atlanta Beltline Emerald Necklace integrates open space and transit along a 23-mile loop of underused train tracks. The scheme draws on past concepts, including Frederick Olmsted's, for parks.

AR: *Where is the money for public space coming from?*

AG: The Hudson River Park Trust in New York is typical. It's a $300 million joint venture of the state and the city, with a citizens' committee involved in its planning. It began with citizens demanding that the West Side Highway be something better than just a roadway. Private entities, many modeled on New York City's Central Park Conservancy, have formed and created master plans in response to the postwar disinvestment in the public realm.

AR: *Do you see this reclamation and expansion of public space as a nationwide trend, or only restricted to cities like New York, San Francisco, and Washington, D.C.?*

AG: This trend exists in cities across the country. My experience at the moment in Atlanta is a good example. I worked with the Path Foundation—which promotes bicycle riding—and a number of remarkable park advocacy groups. The back-to-the-city movement spurred me to propose the creation of 2,500

Alex Garvin & Associates has drawn up a design for transforming Atlanta's Bellwood Quarry, 2.5 miles from downtown, into a park.

acres of open space, including 1,400 acres of new green space and parks, to the Trust for Public Land, a national land conservation group. The Beltline Emerald Necklace, loosely modeled on Olmsted's Emerald Necklace in Boston, transforms a 23-mile loop of an old rail corridor into a trail and bikeway along with a light rail system that will link to MARTA at three new stations and at an existing one. In addition, the plan calls for building new housing on 530 acres. The Beltline is the biggest addition to an urban park system in the country, and it will reach into Atlanta's most economically starved area, west and south of downtown, dramatically enhancing the lives of people who have been excluded from recreation facilities.

AR: *Is this project going ahead?*
AG: Mayor Shirley Franklin has endorsed the plan and created the Beltline Partnership. In December of 2005, the City Council approved a tax increment district to generate from $1 billion to $2 billion in bond revenues over 25 years to help pay for this project. Then in April, the mayor endorsed acquiring the Bellwood Quarry for the park, which, at 579 acres, will make it the largest park in Atlanta. We are working with the Beltline Partnership on a conceptual design and feasibility study for the quarry.

AR: *You've compared the Beltline concept to Olmsted's Boston park plan of the 1870s. What's so new or different about Atlanta?*
AG: It's the first time ever that a park system, a transit line, a trail, and bike path have been rolled into one. We have light rail going up in many cities—San Diego, Portland, Denver, Minneapolis. The conversion of rails to trails has been under way in more than 1,000 cities around the country, but never on this scale, and never where it encircles an entire city within 1.5 miles of downtown and midtown. A student at Georgia Tech originally conceived the idea for a transit loop here in his master's thesis in 1999. The Beltline, once developed, will reorient Atlanta from a city framed by highways to a city framed by a magnificent public realm. It will allow people to live and work in Atlanta without getting on choked highways.

AR: *That leads us to the problem of sprawl: Did you really say that sprawl is not a huge issue anymore?*
AG: It's not the burning issue. It's almost beginning to reach the limits of what we can serve with our highway systems. And there's not much support for building new highways. We're going to need to reinvest in existing neighborhoods. And that is what my plan for Atlanta's Beltline Emerald Necklace does. It provides a public realm around which the population can grow.

AR: *On another note, New York City lost its bid for the Olympics, but did the effort have lasting consequences?*
AG: The park we planned for Brooklyn's Williamsburg neighborhood is going forward, as is the building of 4,500 apartments in what would have been the Olympic Village in Queens West. Other important things came out of the Olympics, most important, a change of psychology in the city. When I started working for a New York bid, people were sick and tired of redevelopment, of Robert Moses's ideas. We came out with a plan that said, "You can do things within the existing framework of the city without wiping it out." Our plan placed all the properties within walking distance of the subway, so we could move half a million spectators each day without their setting foot in automobile traffic. Second, the Bloomberg administration took many of the lessons of what we did and ran with them, including the idea of redeveloping the Hudson Yards on the West Side and rezoning the area, extending the Number 7 subway line, and expanding the Javits Convention Center. The refocus of Midtown westward also became city policy in large measure because of work we had done.

ATLANTA'S BELTLINE IS THE BIGGEST ADDITION TO AN URBAN PARK SYSTEM IN THE COUNTRY.

AR: *These projects are long-term, but the politicians who underwrite them usually last only eight years. Isn't this a problem?*
AG: You get continuity from the permanent government, which everyone forgets about. Tupper Thomas has been in charge of the Prospect Park Alliance in Brooklyn since 1980, and Robert Moses, New York's park commissioner from 1934 to 1960, was an appointed official. We have a lot of very dedicated people in government who don't get the credit they're due.

AR: *Are there trends you picked up on when planning the Olympics?*
AG: Yes, one is that sports facilities don't have to be enormous monuments. Coors' Field in Denver and Jacobs Field in Cleveland represent something other than the enormous sports stadium in the middle of a green field. And when it comes to cultural centers that generate activity, I think Cincinnati shows the way. Just look at the Aronoff Center for the Arts, designed by Cesar Pelli in 1995,

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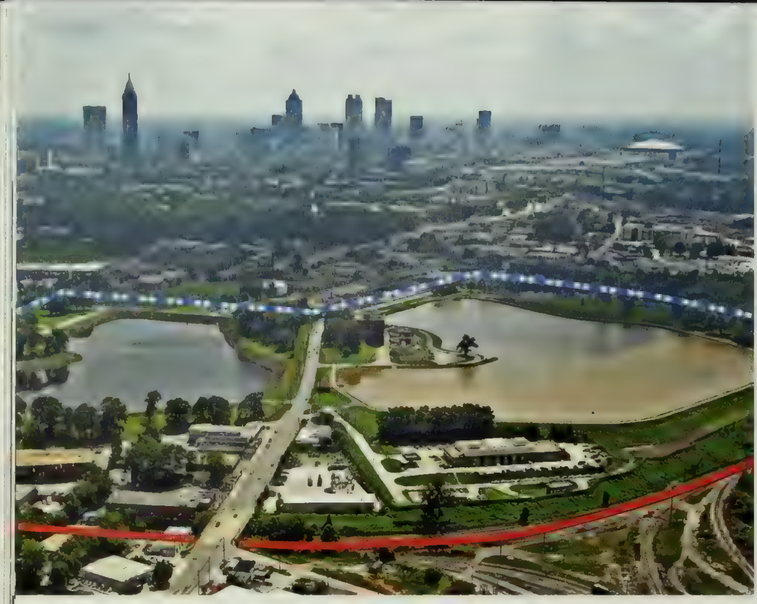

As part of the Atlanta Beltline, Alex Garvin has proposed incorporating Waterworks reservoirs on Howell Mill Road into a park.

and across the street Zaha Hadid's new Rosenthal Center for Contemporary Arts [RECORD, August 2003, page 86]. And they didn't build a garage. People park in existing downtown garages that would otherwise be empty at night and on weekends.

AR: *We can see how a cultural center, however you define the term, could provide a steady stream of visitors, but a sports center?*
AG: You have to distinguish among different kinds. A baseball stadium operates 200 days a year, a football stadium, nine or 10 days a year, but you can turn a football stadium into something that is more than a nine-day affair. Arenas can host concerts and other kinds of events. In cities like Atlanta and New York, we're putting stadiums on rail yards. Why? Because when you create a huge stadium, you take out everything that was there and kill that portion of the city. But if you start with a vacuum, you bring in customers. I think when we allow the owner of the sports team to determine what it's going to be and where it's going to go, we run into problems. When the community is involved, we tend to make better choices.

AR: *You have consistently introduced high-profile architecture into large-scale planning projects in a way that we have not seen in traditional planning.*
AG: I don't want to produce something that's not high quality, and the public wants architecture that will be an asset to their community. Thom Mayne's mixed-use project at Queens West centers on a 43-acre park. It started as a gathering place for Olympic athletes, but in fact it's a new way of doing a whole neighborhood.

AR: *You stress what Mayne's project will do rather than how it will look. Conversations about employing top designers often focus on their celebrity value and its ability to attract public attention and investment.*
AG: Yes, and in the plan for the World Trade Center site in Lower Manhattan, I think people have been mesmerized by the wrong thing, by the "wedge of light" instead of the piazza in front of the Calatrava's new transportation hub. In Lower Manhattan, known for its dark canyons, we created a public square. That is a major bit of planning. To capture the public's imagination, a high-profile architect needs to grab onto ideas that resonate with the public.

AR: *Speaking of ideas the public likes, what do you think about the ones that the Congress for New Urbanism has espoused? Are we making many new places that achieve urban amenity?*
AG: Yes. It is absolutely happening, but it's not necessarily coming from the New Urbanists. I admire Duany Plater-Zyberk, but its small-town vision is not appropriate to high density. You need very high densities to support public transit and transit-centered suburban development. My favorite two communities are in suburban Columbus, Ohio. They are New Albany and Easton. Both have residences mixed with retail at high-density levels. New Albany, designed by Jaq Robertson [of Cooper Robertson & Partners], is 35 percent open space. Unlike other golf course communities, it has a roadway for running and bicycling, so that the public realm is enhanced by the golf course. It's a cul de sac, but what a charming one, and it's doing very well. Easton is the Wexlers trying to create a town square.

AR: *What advice do you have for young planners or architects working on large urban projects?*
AG: Since the 1960s, planners have moved away from the physical aspects of design toward policy. But we elect public officials to make policy. The planner has to be able to provide expertise that the mayor and local council members don't have. When you want to fit the stadium in here or the velodrome there, you need to do the design work that goes with it. I believe architecture and planning must be interrelated.

MY FAVORITE TWO COMMUNITIES ARE IN SUBURBAN COLUMBUS, OHIO—NEW ALBANY AND EASTON.

Architects have naïve, if any, notions of politics. If you want to see a truly effective public presentation, watch Hugh Hardy. He can have everybody eating out of his hand. That's politics, but politics also means understanding why the governor or the council member views things a certain way. The major problem is that both architects and planners think in terms of projects—not of the city as a whole or of how that project can benefit the surrounding community.

We don't have enough good planning or good architecture, and that troubles me, but who would have thought that Atlanta would adopt an antisprawl plan in the form of a park system? Who would have thought the Port Authority would hire Santiago Calatrava? Those are real results. We need this in every city in the country. ■

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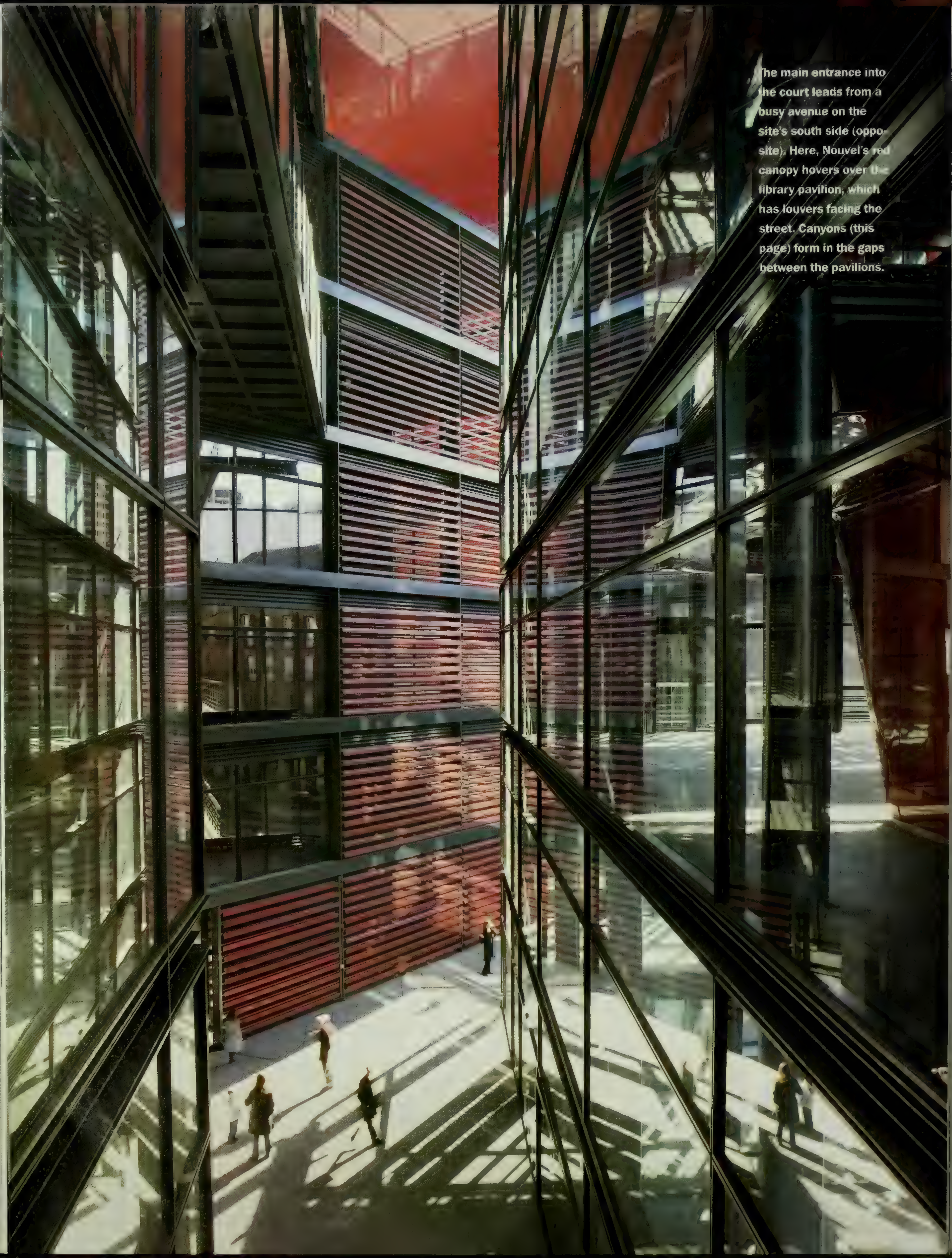
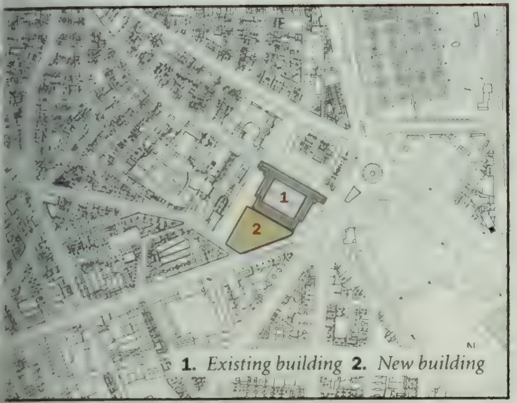
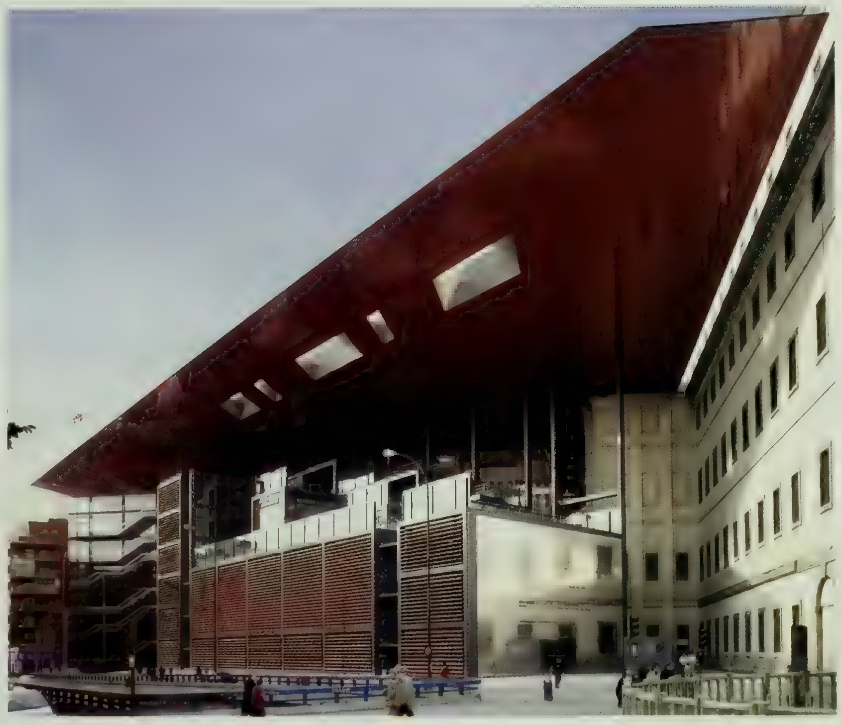


The main entrance into the court leads from a busy avenue on the site's south side (opposite). Here, Nouvel's red canopy hovers over the library pavilion, which has louvers facing the street. Canyons (this page) form in the gaps between the pavilions.

Jean **Nouvel** adds three freestanding pavilions to Madrid's **REINA SOFÍA MUSEUM** and then floats a winglike canopy above them



1. *Existing building* **2.** *New building*



By David Cohn

With his addition to the Reina Sofía National Museum Art Center in Madrid, Jean Nouvel has set himself the challenge of working in shadow, defying he idea that architecture, as Le Corbusier famously wrote in *Toward a New Architecture*, is "the masterly, correct, and magnificent play of forms brought together in ight." Nouvel has completely covered his project—three ndependent pavilions arranged around a central court—with a hovering plane of polished, lacquered aluminum, which extends from the museum's existing building "like a shadow," as he puts it. The 86,000-square-foot canopy offers welcoming shade on Madrid's hot and cloudless summer days, at the cost of throwing the project into gloom during the long winter months—although Nouvel has punctured the roof in places to reveal patches of sky and admit shafts of light into the court. "It's a lightweight wing the color of red roof tiles," the architect elaborates, "a wing that is friendly and protective, showing visitors that it is watching over them."

Without the play of light and shadow, Nouvel had to turn to alternative modeling strategies, capturing reflections and indirect light through the use of painted metal, glass, and other shiny or transparent surfaces, as well as color and night lighting. The exterior materials include bright red polyester tiles on the auditorium pavilion, galvanized metal grilles, and custom-extruded, red aluminum louvers. This mechanistic construction, typical of Nouvel's work, is closer in spirit to the contemporary city's caravan of cars and buses than to Madrid's traditional masonry buildings, including the original museum, an immense mass of granite and stucco-finished brick.

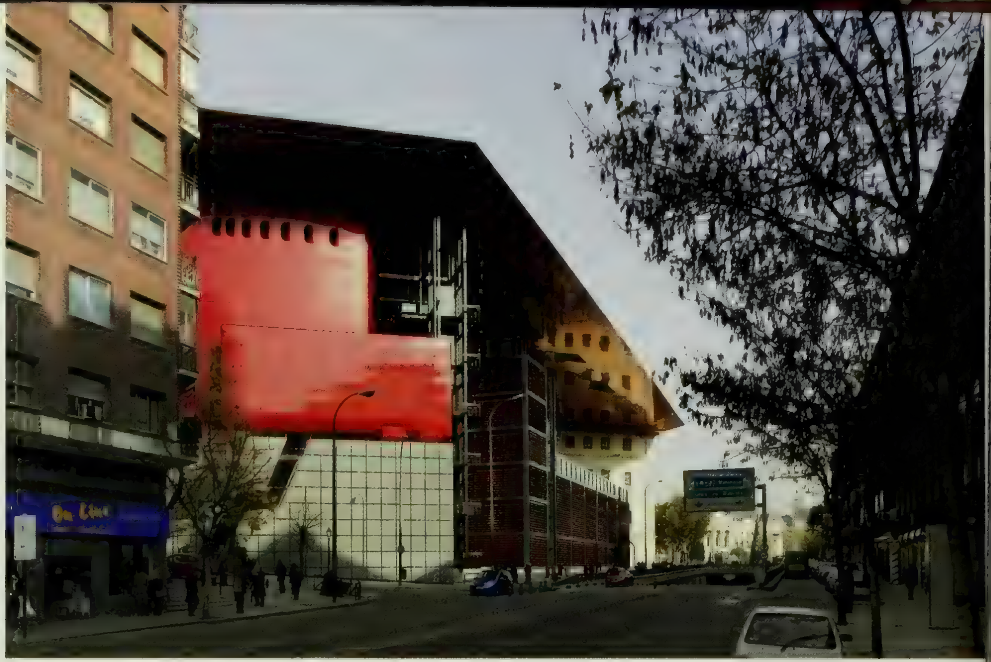
First opened in 1986, the Reina Sofía occupies an 18th-century hospital, a forbidding 265,000-square-foot structure, designed in 1769 by Francesco Sabatini, the court architect to King Charles III. Just a few blocks from the Prado Museum, it houses a comprehensive collection of 20th-century Spanish art (including Picasso's *Guernica*), which attracts 1.5 million visitors a year. In 1990, as part of an intervention directed by Spanish architects José Luis Iñiguez de Onzoño and Antonio Vázquez de Castro, British architect Ian Ritchie memorably added frameless glass elevator towers to the entry facade. Nine years later, the museum held a limited competition with the goal of drawing secondary activities out of the main building to free up space there for the permanent collection. Among the twelve competing architects, Nouvel won first prize, Dominique Perrault second, and Juan Navarro Baldweg third.

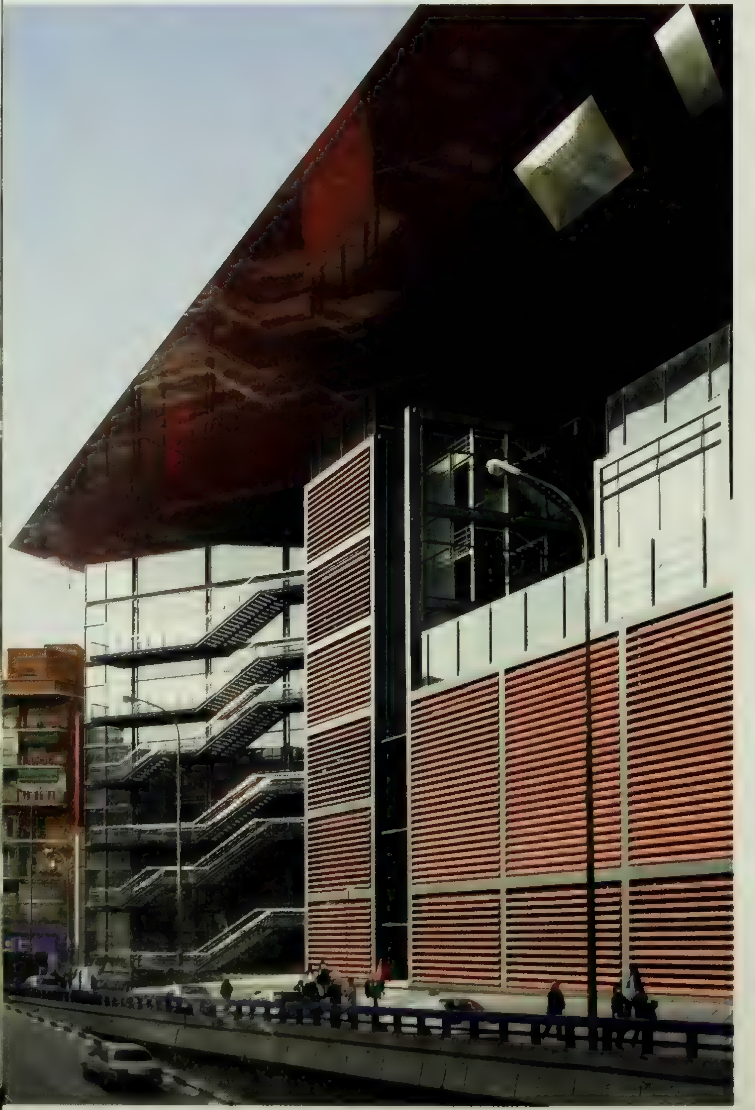
The addition's triangular site, to the southwest of the existing museum, faces a congested avenue. (The city plans to extend a tunnel that will bury this artery and permit the creation of a new pedestrian forecourt, which will shield the museum from traffic and noise.) Access to all three of Nouvel's structures is from the central plaza, which opens to the

David Cohn is RECORD*'s Madrid-based correspondent.*

Project: *Addition to Reina Sofía National Museum Art Center, Madrid*
Architect: *Ateliers Jean Nouvel—Jean Nouvel, principal; Alberto Medem, project architect; David Fagard, Gian-Luca Ferrarini, Jérémie Lebarillec, Sergio Noero, Florence Rabiet, Sophie Thullier, Mounie El Hawat, competition team; Gian-Luca Ferrarini, Anne Lamiable, Augustin Miranda, Carlos Noguiera, Adelino Magalhaes, Eloisa Siles, Marcos Velasco, Fermina Garrido, Antonia Garcia, Rafael Cañizares, Barbara Belloso, Higinio Esteban, Javier Piedra, Raul Pleite, Camila Campo, project team*

At the site's southwest end, stairs act as a brise-soleil for the auditorium lobby (below). Reflections of street traffic and the original building flash across the underside of the canopy (right and below).



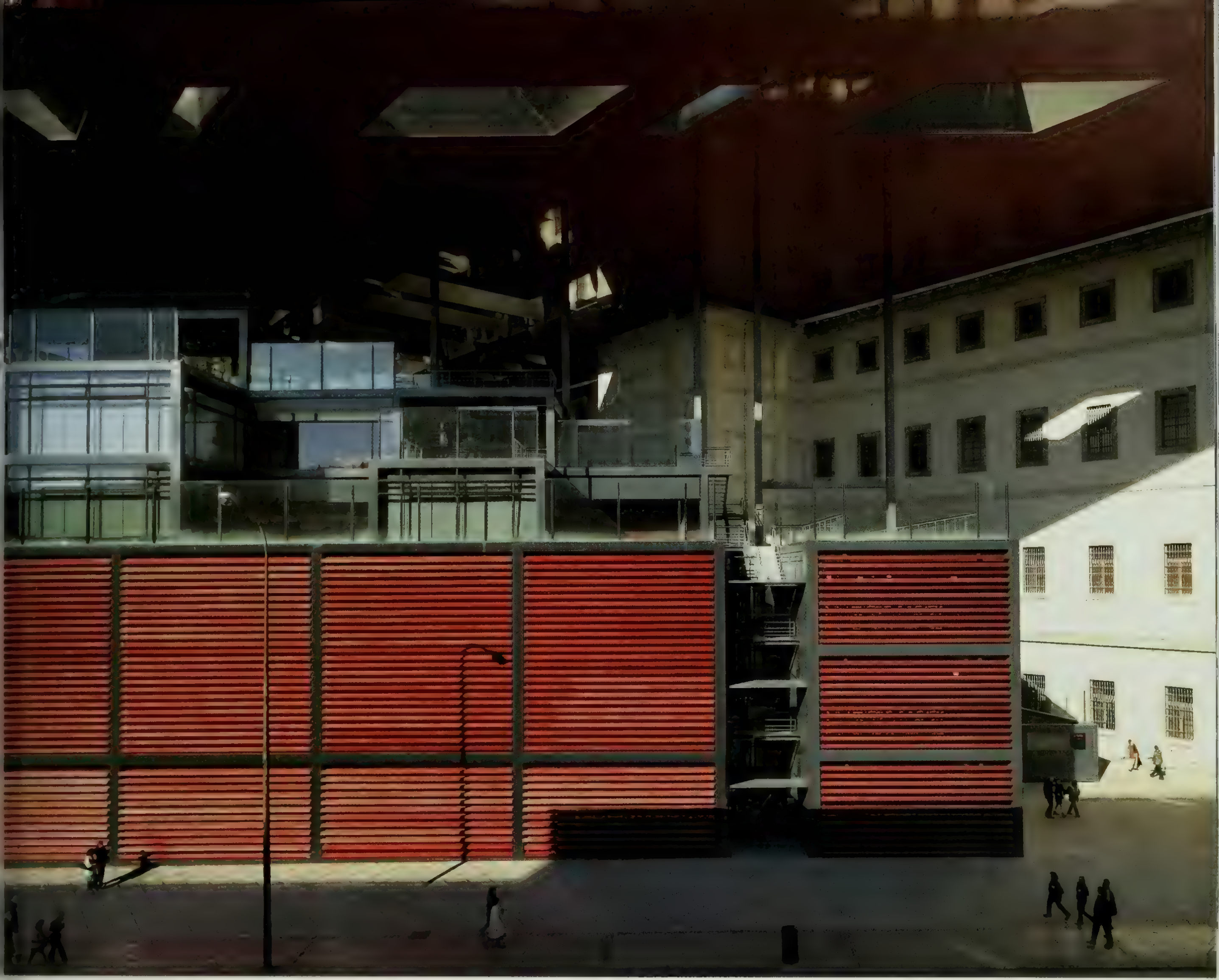


street on either end. Distinct from one another in program and personality, the three pavilions contain, respectively: the library and bookshop; the temporary exhibition galleries; and the restaurant and café, rising to two auditoriums above.

The 24,000-square-foot library and 6,000-square-foot bookshop occupy a volume designed to buffer the museum precinct from the boulevard. The library's soaring main reading room extends one story below grade, with ground-level windows on either side, establishing a visual connection between street and court, reminiscent of views through an aquarium. Four mezzanines of backlit book stacks and built-in desks ring the space, finished entirely in dark jatoba, a Brazilian cherry wood. An oval lens made up of cubic glass "dice," especially designed by Nouvel and fabricated by Spain's Royal Glass Factory of La Granja, floats below the ceiling, filtering electric illumination as well as daylight seeping in under the roof wing. Project Architect Alberto Medem calls this abstract chandelier "the medusa," as if it were a great jellyfish, observed from an underwater depth.

The 65,000-square-foot pavilion on the north side of Nouvel's site includes two floors of temporary exhibition galleries, with an upper level public connection to the original building. This volume also houses offices, basement art storage, and art handling facilities. In the galleries Nouvel offers the kind of neutral, diaphanous spaces curators demand with proportions more generous than the typical 50-foot-wide, barrel vaulted masonry bays of the original hospital building. He opened th galleries to the court through a continuous wall of glass, protected b motorized aluminum louvers and wide interior shades of plastic fabric though the curators routinely keep these blinds closed. A sophisticated membrane of V-shaped extruded aluminum slats on the gallery ceiling covers the structural beams and incorporates lighting, ventilation, an acoustic absorption. Evoking Ritchie's graceful towers, Nouvel ha included glass elevators and stairs sheathed in industrial-textured stee providing access to the galleries.

The third pavilion's 78,900 square feet include the restauran and café with the two auditoriums upstairs. In contrast to the expose steel structure of the other pavilions, this one is encased in a concrete she supported by two powerful molded-concrete pylons. The concrete is finished inside and out in hard-polished polyester fiberglass in a brilliant re (like the curvy, injected-plastic casing of a vacuum cleaner), with jazz



temporary exhibi-
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court, through a gap
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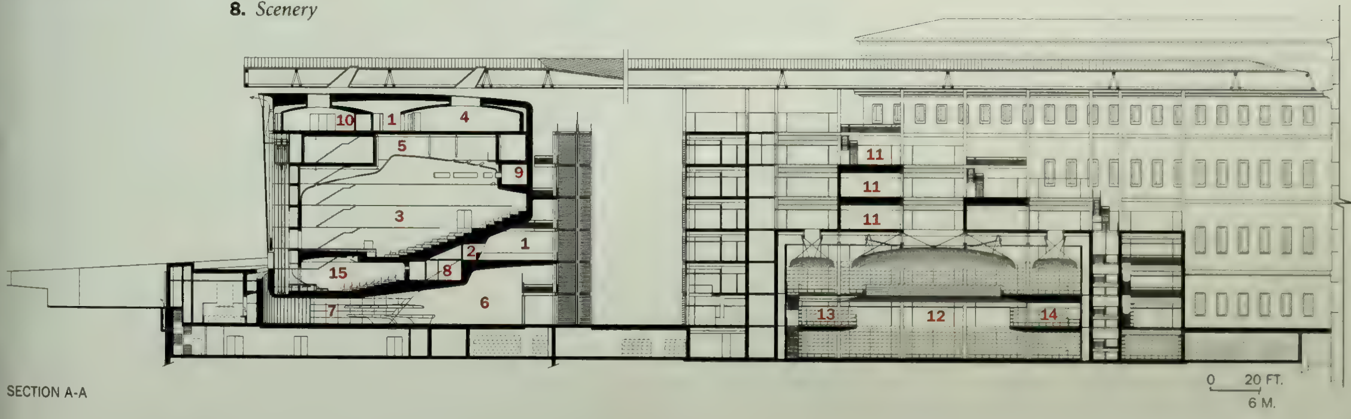
azed offices rise
ve these galleries.

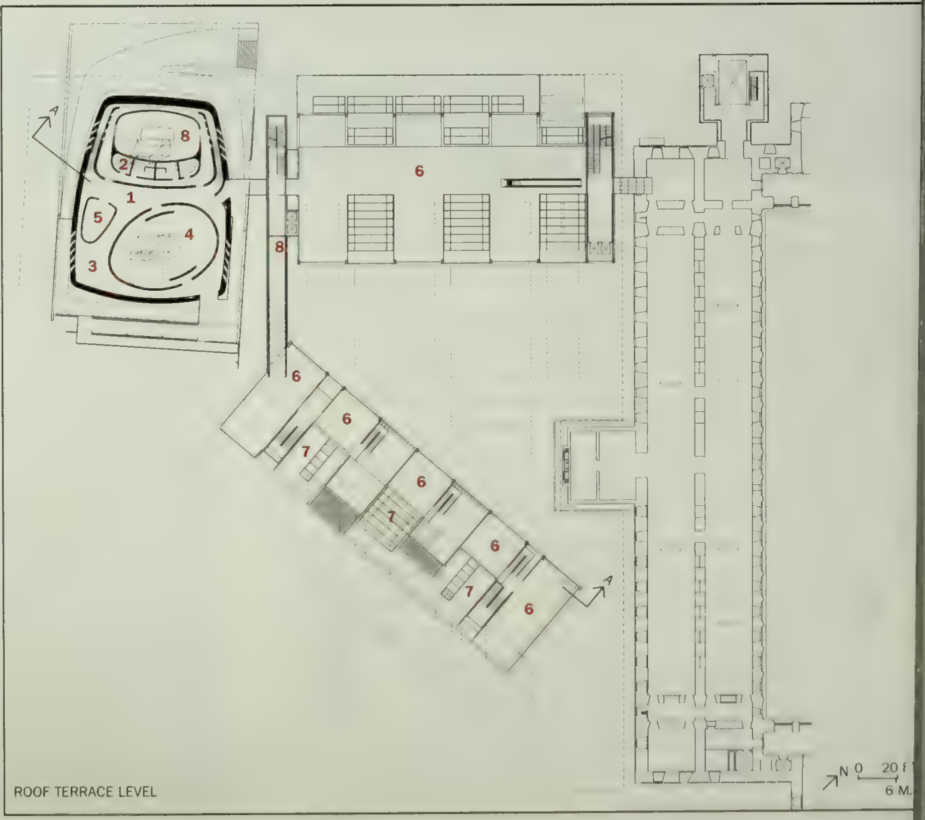
1. *Vestibule*
2. *Coat check*
3. *441-seat auditorium*
4. *VIP reception*
5. *Technical walkways*
6. *Cafeteria*
7. *Restaurant*
8. *Scenery*
9. *Control booth*
10. *Patrons' room*
11. *Office*
12. *Reading room*
13. *Book exhibition*
14. *Bookstore*
15. *Reception*

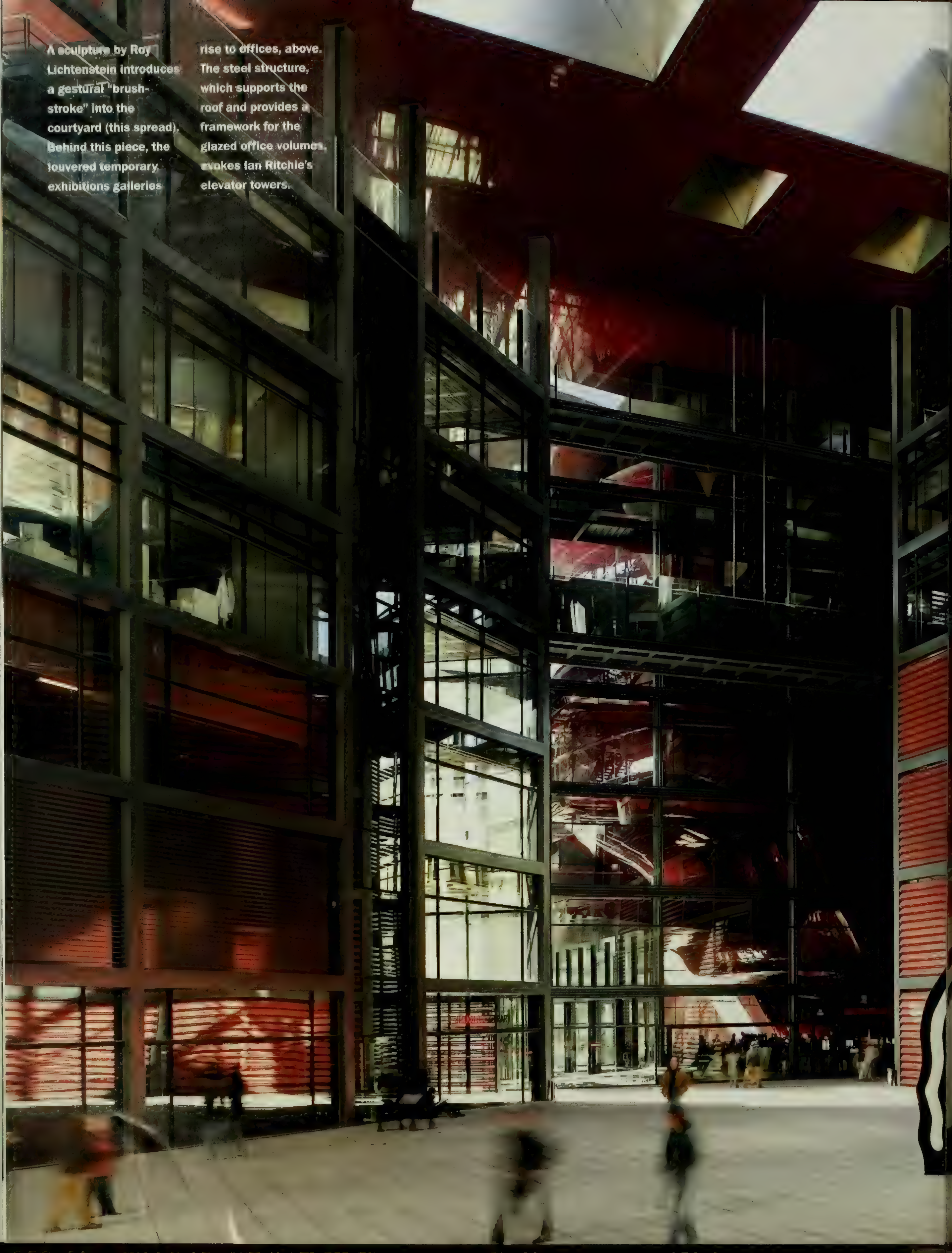


SECTION A-A

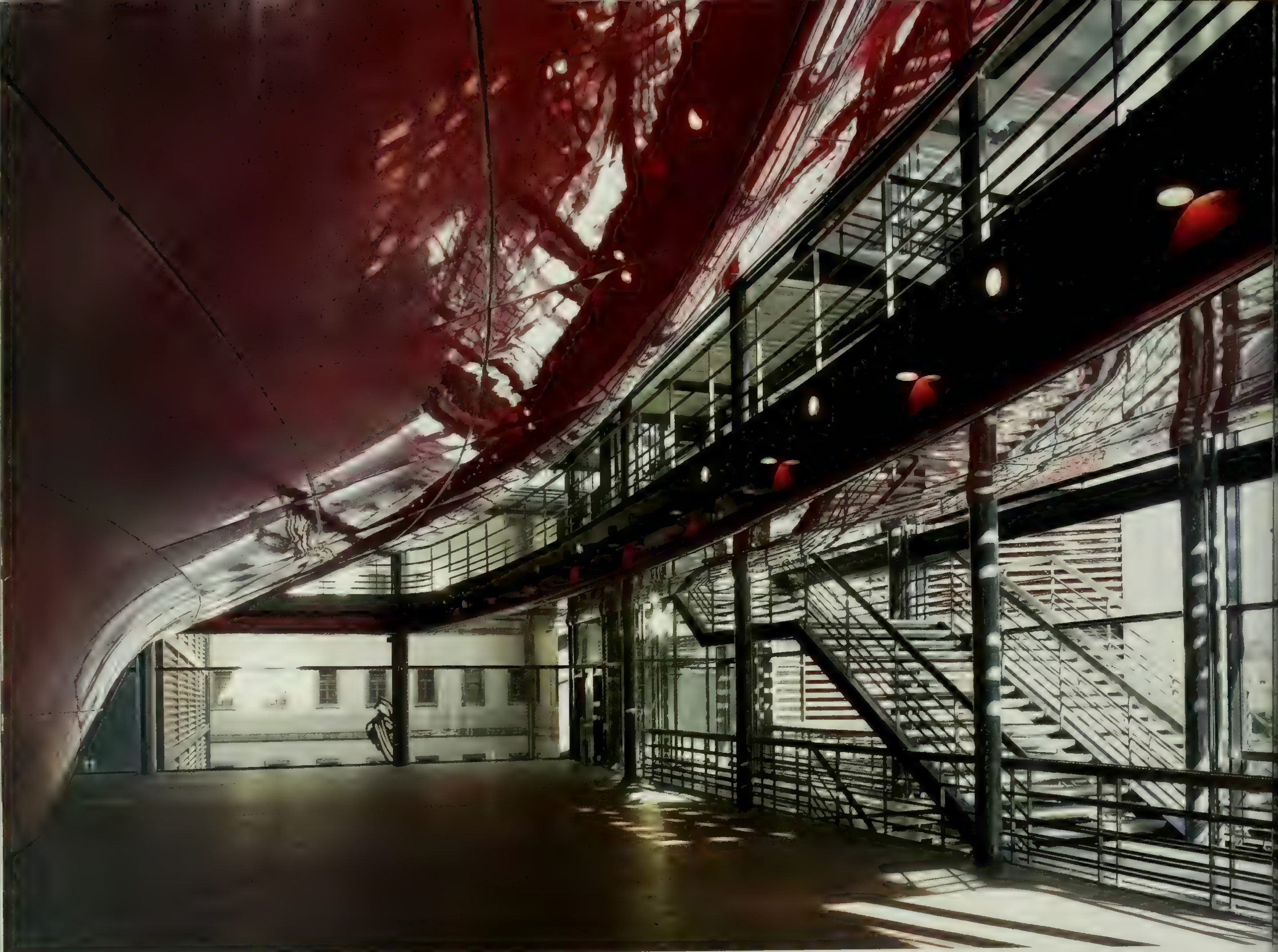
From within the courtyard (left two and opposite), the original masonry building appears juxtaposed against Nouvel's new pavilions and great canopy. Beneath the cutouts in the roof, which bring in light and allow for upward views, the courtyard lies open to the elements. The canopy varies in depth, tapering down to a thin plane at its edges, while elsewhere it becomes thick enough to house mechanicals and large trusses.

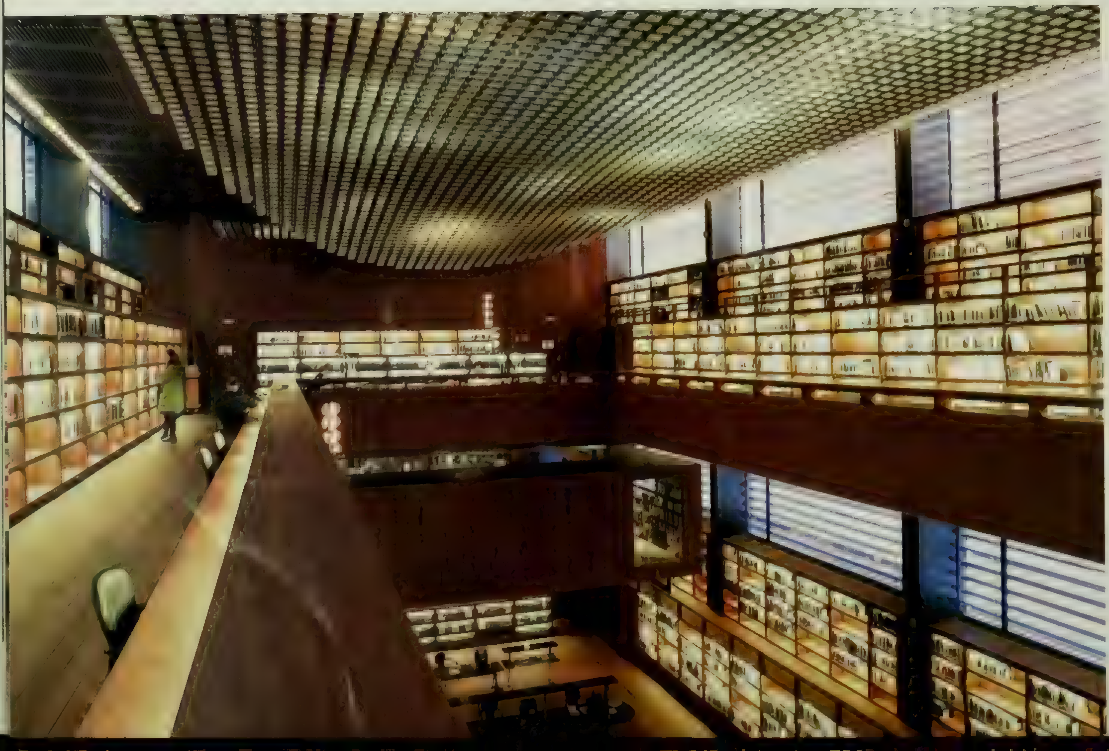
1. *Vestibule*
2. *Coat check*
3. *Connection to library*
4. *VIP reception*
5. *Meeting*
6. *Terrace*
7. *Skylight*
8. *Reception*



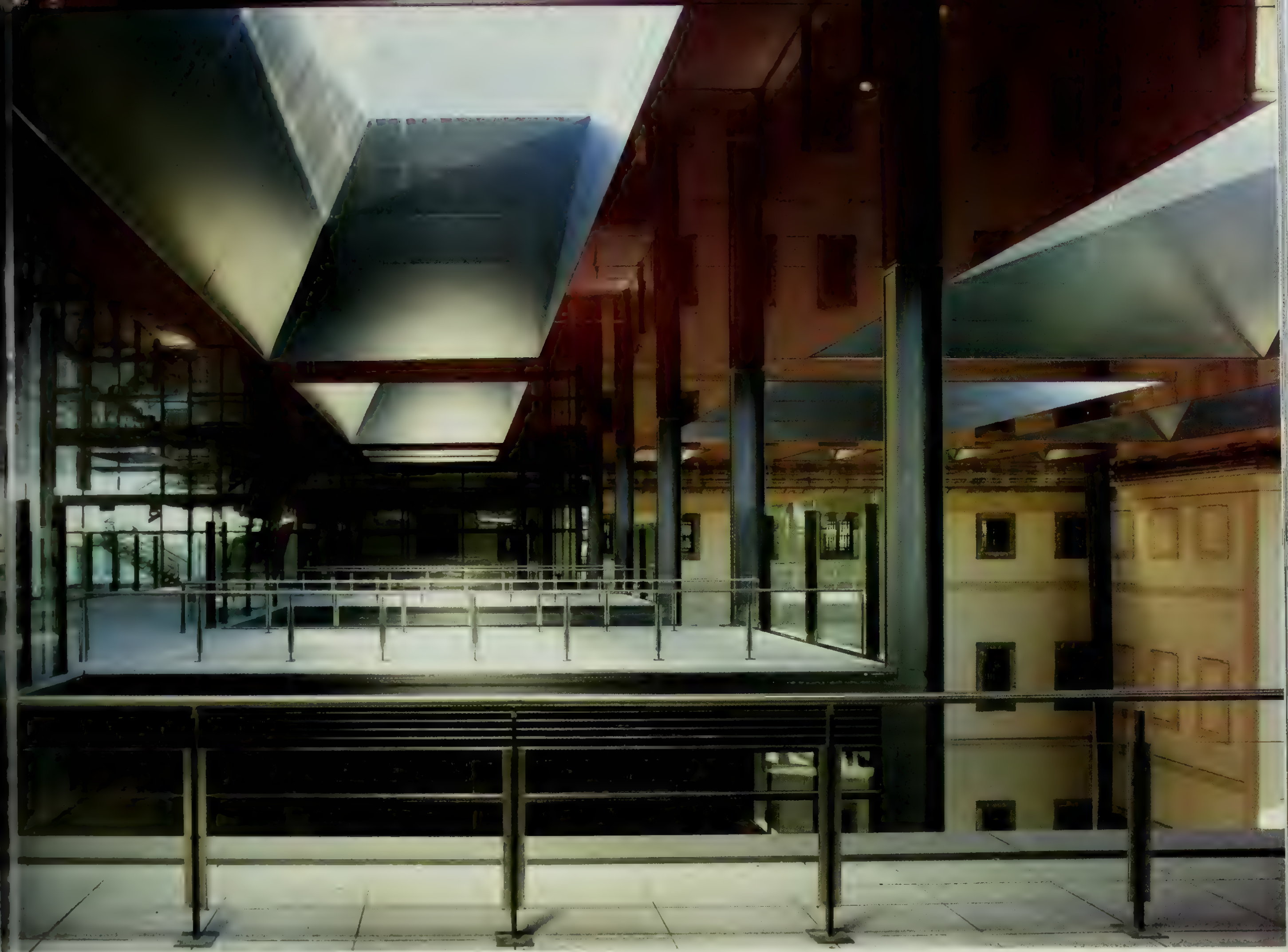


A sculpture by Roy Lichtenstein introduces a gestural "brush-stroke" into the courtyard (this spread). Behind this piece, the louvered temporary exhibitions galleries rise to offices, above. The steel structure, which supports the roof and provides a framework for the glazed office volumes, evokes Ian Ritchie's elevator towers.





The red, polyester-tile-clad underbelly of raked seating bulges into the auditorium lobby (above and opposite, bottom). Here, stairs run on either side of the glass window. In the jotoba-wood-lined library (left), a "medusa" made of blocky glass lenses diffuses light into the reading room. The terraces just under the roof (opposite, top) were originally intended to display sculpture, but a last-minute change in paving rendered it unsuitable for that purpose.



aerodynamic slits for ventilation grilles and skylights. On the pavilion's south facade, stairs on either side of the glazing double as brise-soleils. In contrast to the sober neutrality of the galleries and dark wood of the library, the red polyester gives this pavilion the slick flair of a nightclub.

The most spectacular spatial experience of the complex, though not yet accessible to the public, requires an ascent to the pavilions' roof terraces, just beneath the hovering wing. From here, panoramic views of Madrid unfurl. Nouvel had envisioned filling these terraces with sculpture, but that idea became impractical when a last-minute change introduced a membrane system with fragile, floating granite tiles instead of the originally intended, solid granite paving. The museum director had ordered this modification after a construction accident allowed water to penetrate the galleries, scandalously damaging a painting by Juan Gris.

From the hovering roof, an escalator will take visitors down to the terraces (an experience that evokes disembarking from a UFO), where they will cross a bridge over the courtyard and ultimately reach the ground through a series of staggered decks over the library. Reminiscent of the Hanging Gardens of Babylon, these terraces offer marvelous perches for observing the city. The full impact of the coppery red undersurface of the wing becomes apparent here, as reflections of passing traffic flow across the glossy form of breathtaking, 125-foot cantilevers. Only 86 square feet of column area support the vast roof: a ratio of 1,000 to one. The wing's unseen zinc upper surface rises from the thin edge of the cantilever to 10-foot-deep section at the back of the site, enclosing steel trusses and mechanical equipment.

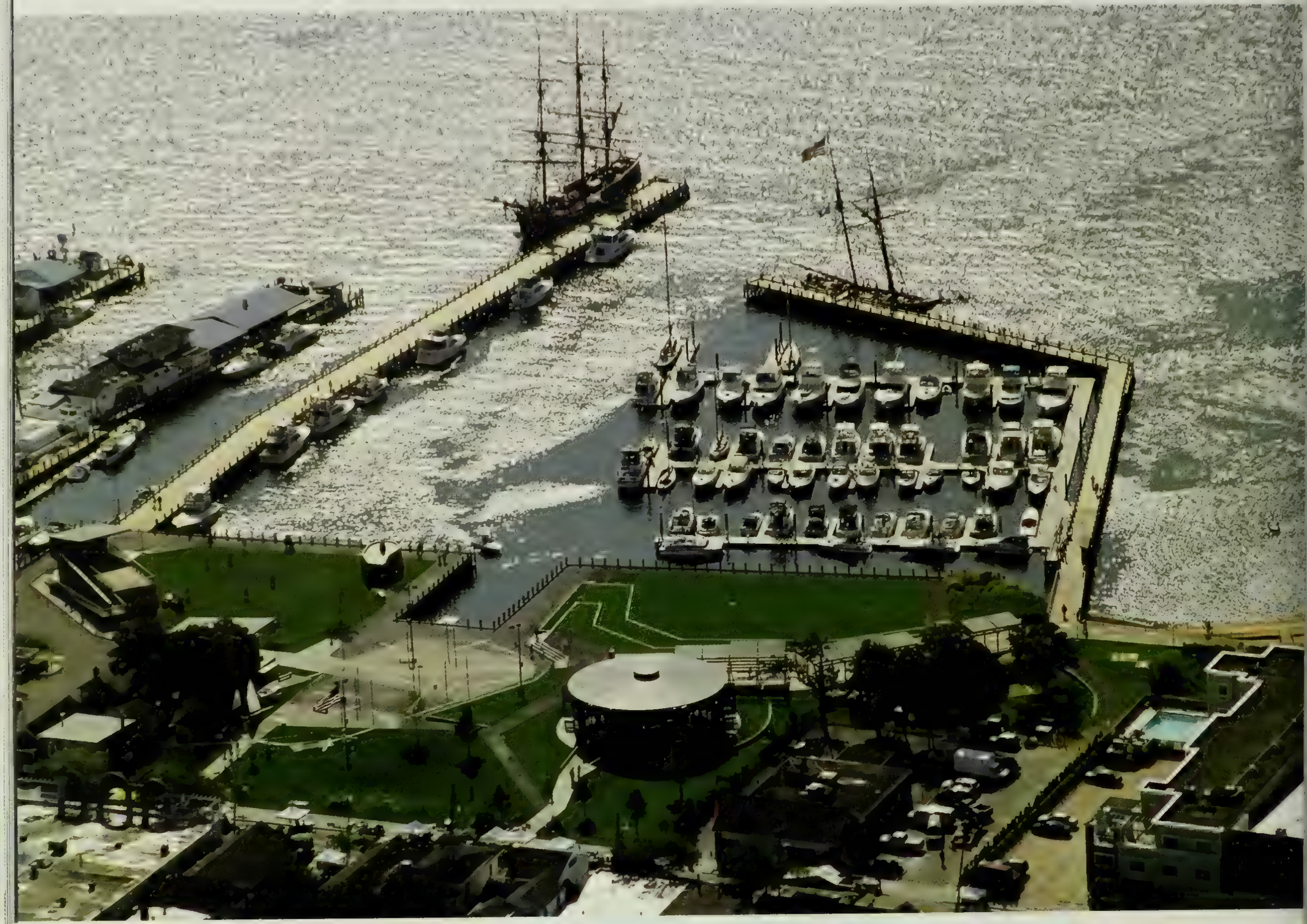
Nouvel has set the floating canopy 98 feet above the street and just below the top floor of the original building in deference to Sabatini's work. Nevertheless, the meeting between old and new seems schematic: a rude gap between the thin blade of aluminum and the museum's fortresslike rear wall. Perhaps a more aggressive intervention in the Sabatini building would have been more effective, though the competition guidelines explicitly forbade it. The original structure, inwardly focused around a large central courtyard, turns its back on Nouvel's efforts, while the new addition, in response, opens its arms to the bustle of the surrounding city. ■

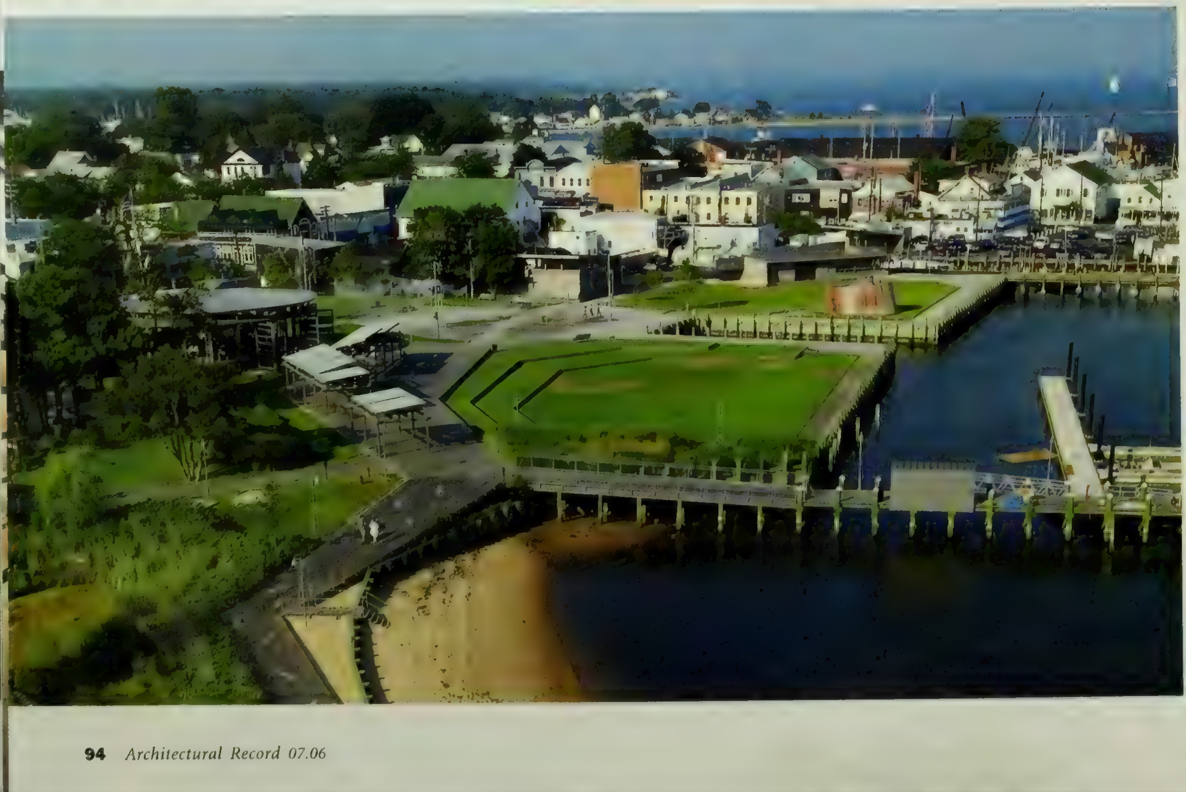
Sources

Curtain wall: *Folcra & Estrumaher*

Lighting: *Erco*

For more information on this project, go to Projects at **www.archrecord.com**.





Aerial views show how the competition design changed over the years. The carousel house moved from the center of the plan to one side, to frame the harbor view from Front Street (top). The elevation of the wooden boardwalk, calculated to rise above periodic floods, also blocked the view, so SHoP terminated it next to the carousel (left), continuing the path with a grade-level plaza and sidewalk to the commercial pier beyond.

PROJECT DIARY It took three phases and 12 years, but SHoP shepherded MITCHELL PARK into the revitalization of a once-despondent town

James S. Russell, AIA

White-clapboard saltboxes, temple-fronted Greek Revivals, and bracketed, frilled, and bay-windowed Victorians have made Greenport, a tiny, 168-year-old seaport at the easternmost reach of New York's Long Island, an idiosyncratic barometer of architectural style. But the years after World War II, when hipbuilding died, were not kind to the 1-square-mile town of just 2,100 people. By the mid 1990s, its scandal-prone police department caught the notice of London's *Daily Mirror*: "Vice Cop Had Sex on Chief's Desk," a headline screamed. The hulk of a burned restaurant was "a cancer" growng in the village's core, according to Mayor David E. Kapell.

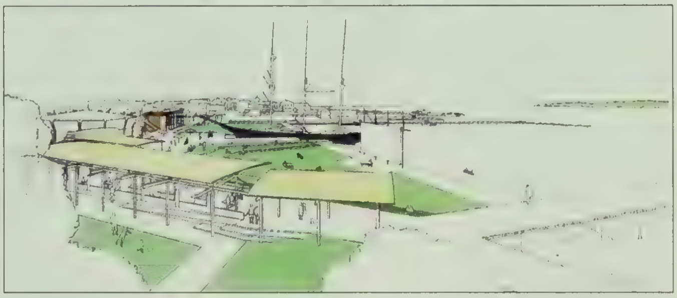
It is hard to find a more clear-cut case of a work of civic rchitecture catalyzing urban regeneration than Mitchell Park. Yes, it emoved a blighting presence at the village's core, but its design—ssertive and magnetic, yet sensitive to Greenport's history and personality—could not have happened without leadership and teamwork that overcame 12 years' worth of obstacles.

1994–1996: A competition replaces despondency with hope

Mayor Kapell made a name by firing the "world's worst police force," but he knew that renovating downtown's derelict 5 acres was a critical next tep. After several commercial schemes foundered, Kapell was able to obtain much of the site from an owner in receivership. He met New York City architect Wendy Evans Joseph, and she proposed to organize a competition for the park Kapell envisioned. He immediately saw its possibilities. "In a profoundly depressed place like Greenport, people are preoccupied by what you can't do rather than what's possible. We had to break out of that insular thinking."

Joseph assembled a distinguished jury, including artist Mary Miss, architects Billie Tsien and James S. Polshek, urban designer Sandro Marpillero, landscape architect Nicholas Quennell, and environmentalist Erik Kriviat. With a successful outreach effort, the open competition ttracted a spectacular response: 500 entries from all over the world. A crafty American Legion Hall was pressed into service as a jury space, and the citizens of Greenport, dazed at the extraordinary outpouring and international press coverage, streamed into the hall to view the designs. "I race the change in psychology in the town to that day," said Kapell in an interview in his combination mayor's office, real estate business, and antique shop. "Greenport became the place where things could happen, instead of the place where nothing could ever happen."

Ice skaters now spin where floodwaters lingered in the 1990s (left). Though much changed, the competition's harborwalk idea (below) guided the project throughout.



Competitors were asked to make a place for a vintage carnival carousel that had been donated to Greenport, as well as a majestic but dilapidated clipper ship. The jury chose a scheme by Philadelphia landscape architect James Corner (now a partner in the firm Field Operations), which capitalized on the town's shipbuilding past by proposing a kind of ramped drydock for both ship and carousel. Townspeople were skeptical of Corner's austerely drawn boards, and Kapell found he could not build support for the plan. The third-prize winner, by Manhattan-based Sharples design—at that time a young firm comprising William, Christopher, and Coren Sharples—offered a more readily grasped vision by uniting the program elements with a harborwalk—an armature of boardwalk, shelters, and benches that stretched along the

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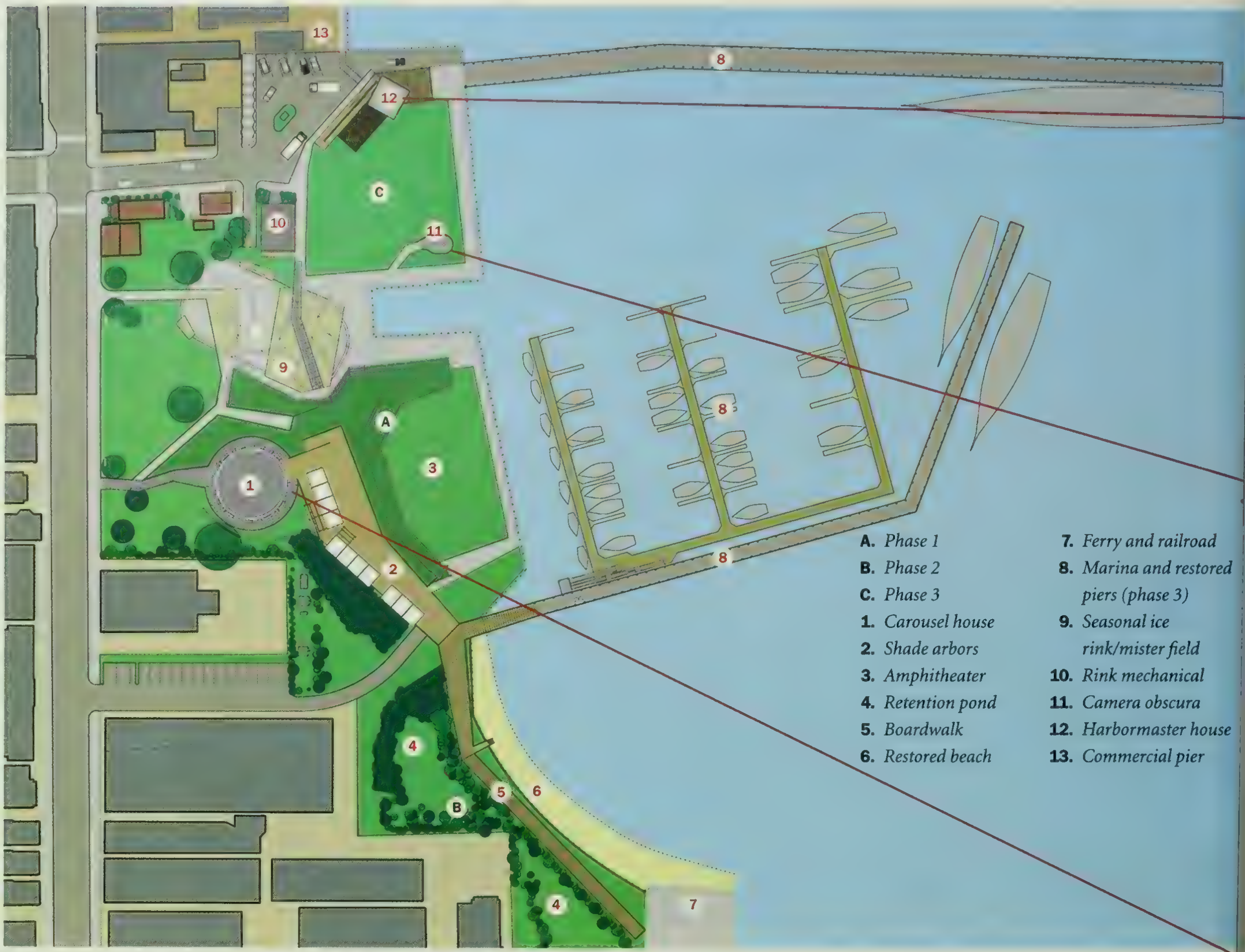
Project: *Mitchell Park and Marina, Greenport, New York*
Owner: *Village of Greenport*
Architect: *SHoP Architects—William Sharples, Coren Sharples, Christopher Sharples, Gregg Pasquarelli, Kimberly Holden, Mark Ours, Reese Campbell, Keith Kaseman, Shigeru Kuwahara, Jason Anderson, Leo Chang*
Marina architect: *Hastings Design Group/BJLA*
Engineers: *Buro Happold (structural); H2M Group (civil, mechanical, environmental)*
Consultant: *Quennell Rothschild + Partners (landscape)*



A. *Phase 1*
B. *Phase 2*
C. *Phase 3*
1. *Carousel house*
2. *Shade arbors*
3. *Amphitheater*
4. *Retention pond*
5. *Boardwalk*
6. *Restored beach*
7. *Ferry and railroad*
8. *Marina and restored piers (phase 3)*
9. *Seasonal ice rink/mister field*
10. *Rink mechanical*
11. *Camera obscura*
12. *Harbormaster house*
13. *Commercial pier*

water from a car-ferry terminal and train station at one end of downtown to a pier lined with stores and restaurants at the other.

In defending the decision to choose the Sharples scheme over Corner's, Kapell explained that "the park was a huge undertaking for the village, and it was an enormous challenge for me and the Village Board to help the community become comfortable with outside designers. Any one of the entries was mindblowingly avant-garde for Greenport."

1997–1999: Design evolves with arsenic and a sinking ship

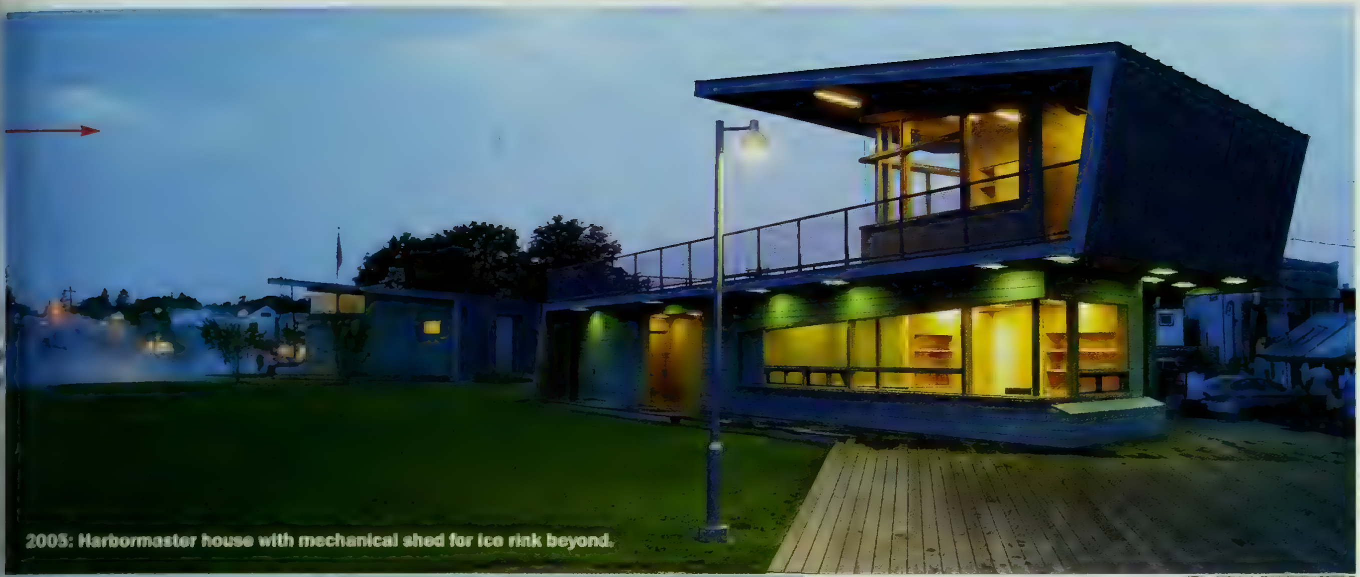
Though the Sharples got the job, their scheme came under immediate challenge. The tall ship sank. It was deemed unsalvageable and dropped from the plan. Once the town bulldozed the site's derelict structures, people fell in love with the long-obscured vista that opened from Front Street to Greenport Harbor, with its bustle of ferries and pleasure boats. The view spurred a change in position for the carousel (photo, opposite, bottom). By this time, the Sharples had formed SHoP architects with Kim Holden and Gregg Pasquarelli, and they took these adjustments in stride: "The scheme was not so image-based that it couldn't absorb change," explained Pasquarelli.

Though cleaning of petroleum-soaked soils had been anticipated as construction began in 1999, an earlier "gift" of fill turned out to be laced with arsenic. A year's cleanup delay and unknown extra costs were in the offing. "If you don't keep a project like this moving," explained Kapell, "it can die a thousand deaths." There were renewed calls to aban don the park and sell the site to a developer. In a novel arrangemen SHoP stepped in to manage remediation, minimizing the delay by stagin construction around the cleanup and capping polluted soils with the par structures to avoid costly and time-consuming soil replacement.

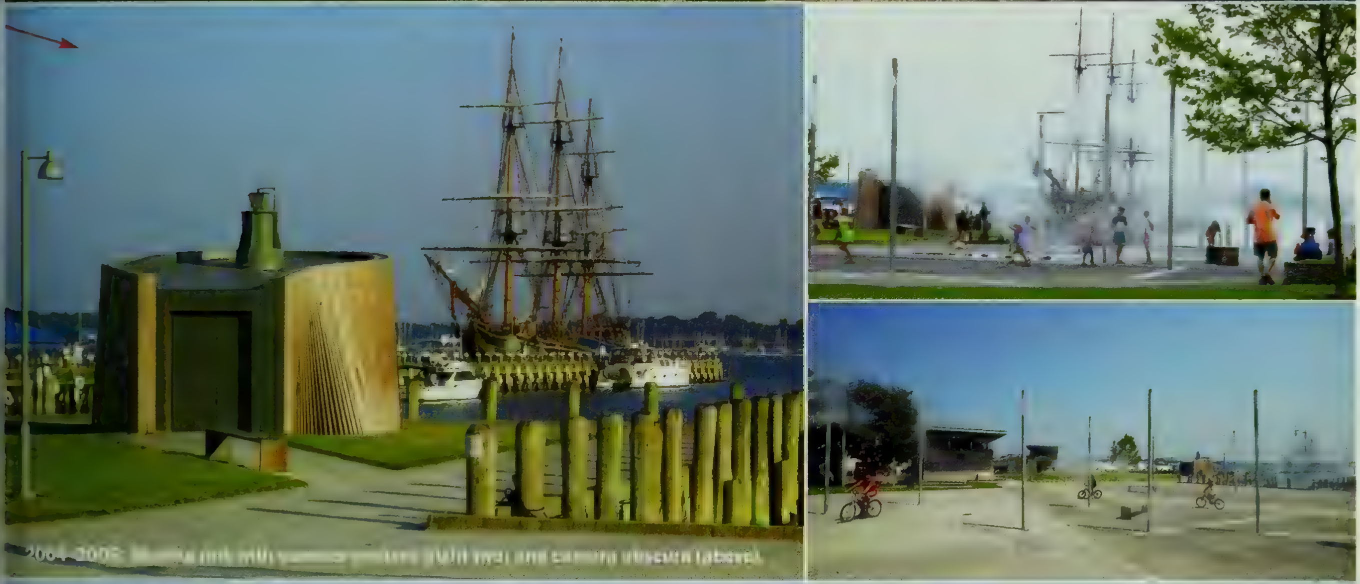
As the park came together, the area around Greenport, the na row, 30-mile spit of land called the North Fork, was attracting an influx second-home buyers and wineries—activity that mostly bypassed the vi lage. That changed when the first phase opened on the July 4th weekend 2001. Once the glass-and-steel doors of the carousel flapped open, childre and parents flocked. The impact on local businesses was immediate as da trippers lingered. It was not long before the village's paint-peeling o houses caught the eye of renovators.

2002–2005: Success spurs momentum

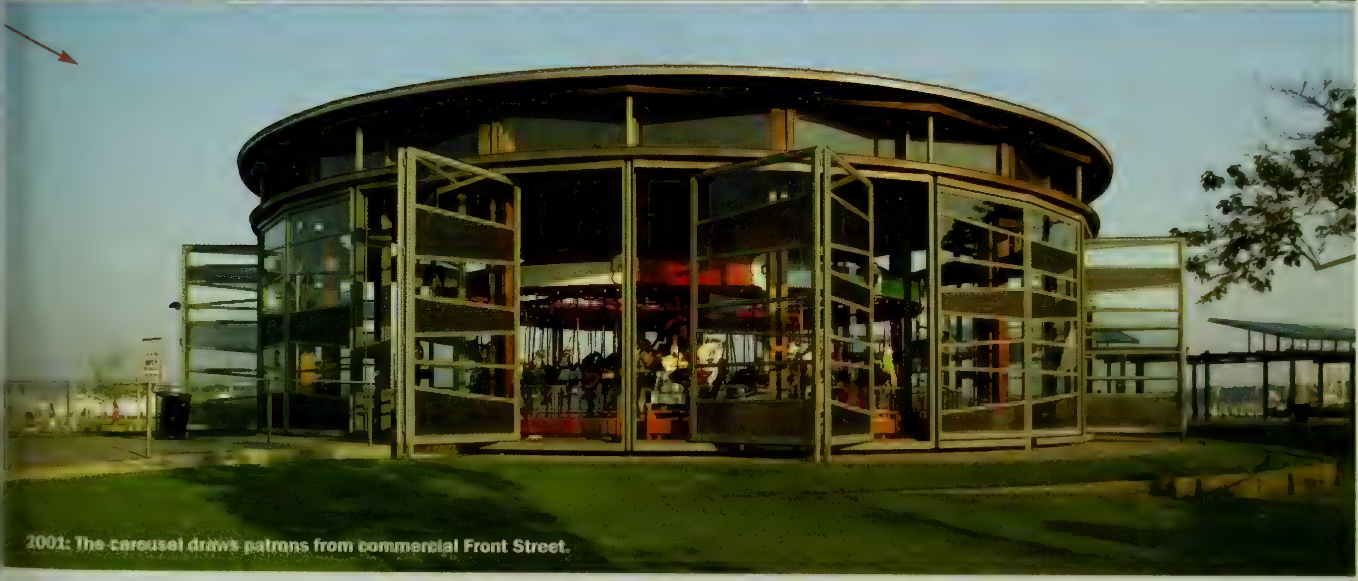
The change in Greenport was so rapid that Governor Pataki took a pe sonal interest in moving the second phase forward. Kapell convinced t New York Department of Transportation that storm-water retenti basins, required to divert polluting road runoff from the bay, should located on the waterfront parcel he needed to complete the park plan. T state agreed, bought the land, and not only dug natural ponds screened filtering native plants, but built phase two, the western end of the harb walk, in 2003. SHoP worked with government regulators (eight agenci



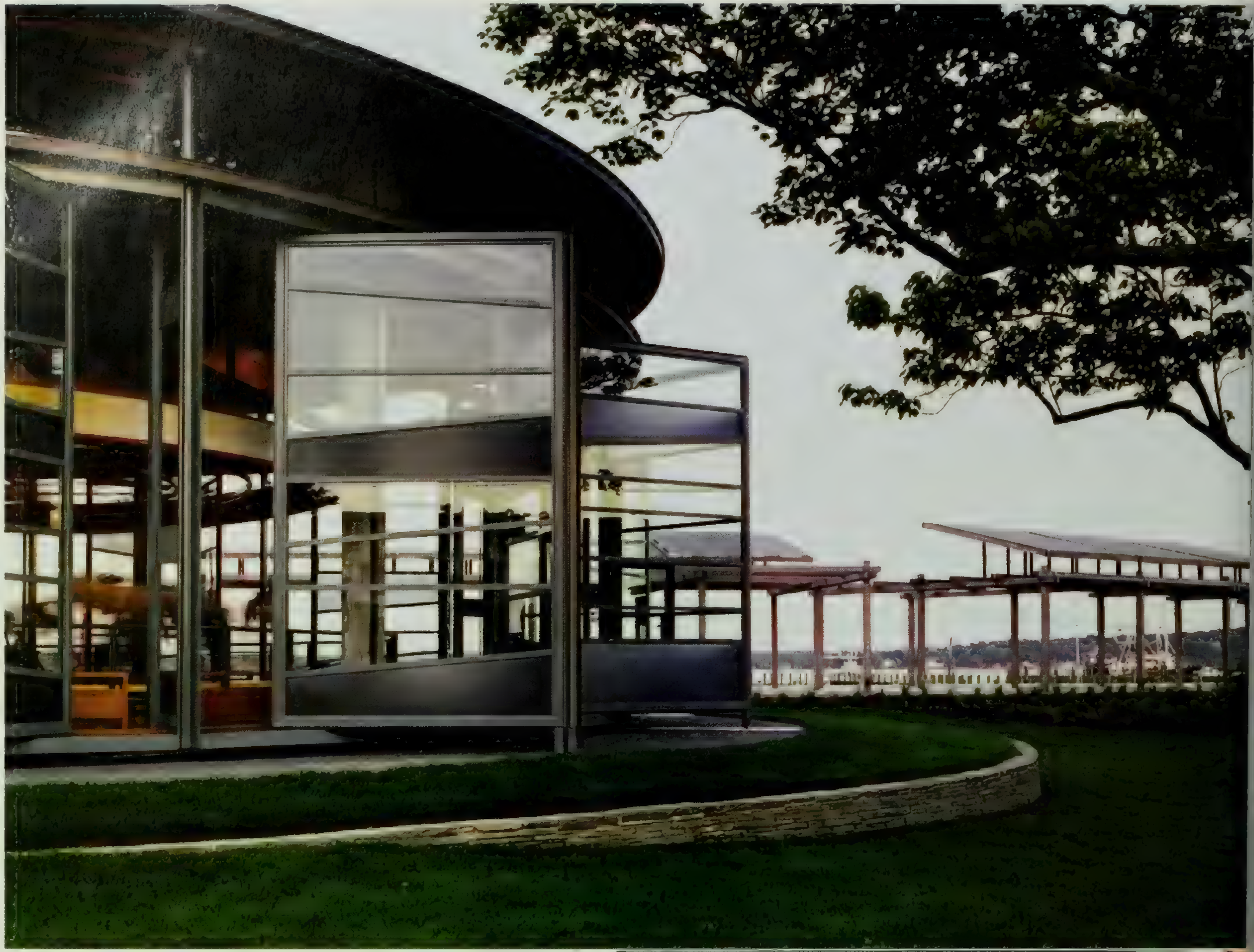
2003: Harbormaster house with mechanical shed for ice rink beyond.



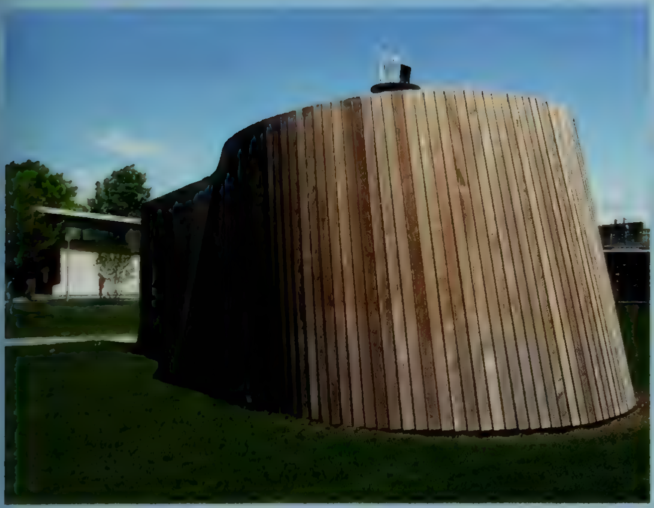
2004–2005: Skating rink with summer fountains (right two) and camera obscura (above).

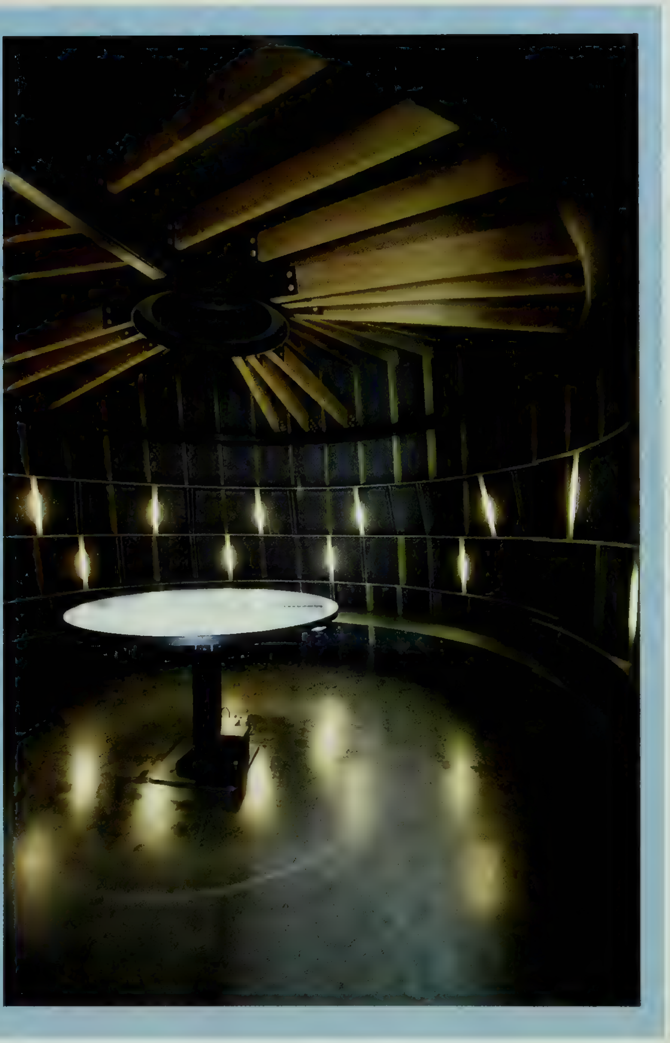


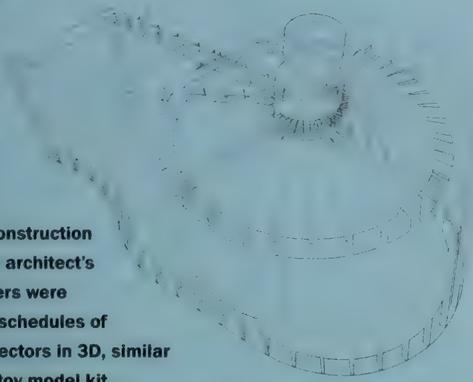
2001: The carousel draws patrons from commercial Front Street.



Massive steel-and-glass bifold doors protect the carousel (above and right), part of the park's first phase, along with the boardwalk and wood shelters (below) that offer views of passing boats and ferries.







"The bid set for the camera obscura focuses on the process of making rather than just describing," explains SHoP partner William Sharples. With construction simulated on the architect's computers, bidders were offered pictorial schedules of beams and connectors in 3D, similar to drawings in a toy model kit.

vere involved from the local to the federal level), taking ecologists' advice o angle the park's new waterfront bulkhead to guide drifting sand toward tiny beach next to the boardwalk. It has rebuilt itself, adding long-legged grets and skittering plovers to the park's visitors. Success allowed Kapell o expand the park's scope in the final phase. A provisional ice rink proved o successful that the mayor asked SHoP to add a permanent version. It its atop a stone-paved plaza festooned with a field of masts that in summer emit wraithlike streamers of mist. John Serkin, a local enthusiast for he Renaissance camera obscura (a mirror-and-lens periscopic device that nysteriously heightens the effect of the view it captures), donated one to he park project.

SHoP's own sensibility evolved over the years. The harbormaster's ouse angles to give marina staff easy views of moored boats. Steel-framed vithin its wood cladding, it zigzags in section, with a ramp leading to an pper-level belvedere that offers panoramas to the harbor and the town's oofscape. To keep the small structures within a budget bid through New York's cumbersome multiple-prime-contractor system, SHoP devised contract documents that left no room for guesswork, especially in the unusual eometries of the camera obscura (above).

The ice rink opened on Christmas 2004, filling a void in a town hat had few winter-recreation options. Merchants who had closed in the vinter months began keeping their doors open as the clack of hockey ticks brought once-deserted streets back to life. The park officially opened the following summer, hosting a full program of Shakespeare, movies, and music performances. Just last month, a 62-slip transient marina welcomed its first boaters.

The park's—and by extension Greenport's—success has been so great that Kapell now faces problems that he could not have dreamed of a decade ago. The new jobs the town now offers go begging because rising real estate values are making the town unaffordable.

Christopher and William Sharples compare the view framed by the buildings that line Front Street to a Piero della Francesca painting where architectural elements frame the human action. The reality feels more ambiguous. Though each structure asserts itself individually, together they seem to extend the pleasing hodgepodge of surrounding structures rather than act as the town's visual exclamation point. In its history, Greenport has embraced every architectural fashion. Mitchell Park—casual, informal, expressive—celebrates that tradition by being contemporary. ■

Sources/Materials

Wood framing: *Engineered lumber; Ipe; Western Red Cedar*

Roofing: *VM Zinc (metal); Firestone (EPDM)*

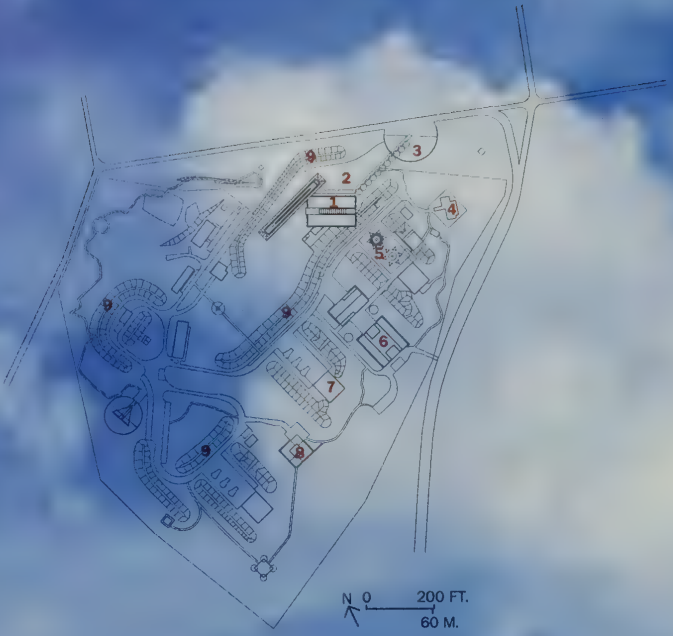
Slate paving: *Pet-Mal*

Resilient flooring: *Forest Stewardship Council certified Ipe (wood)*

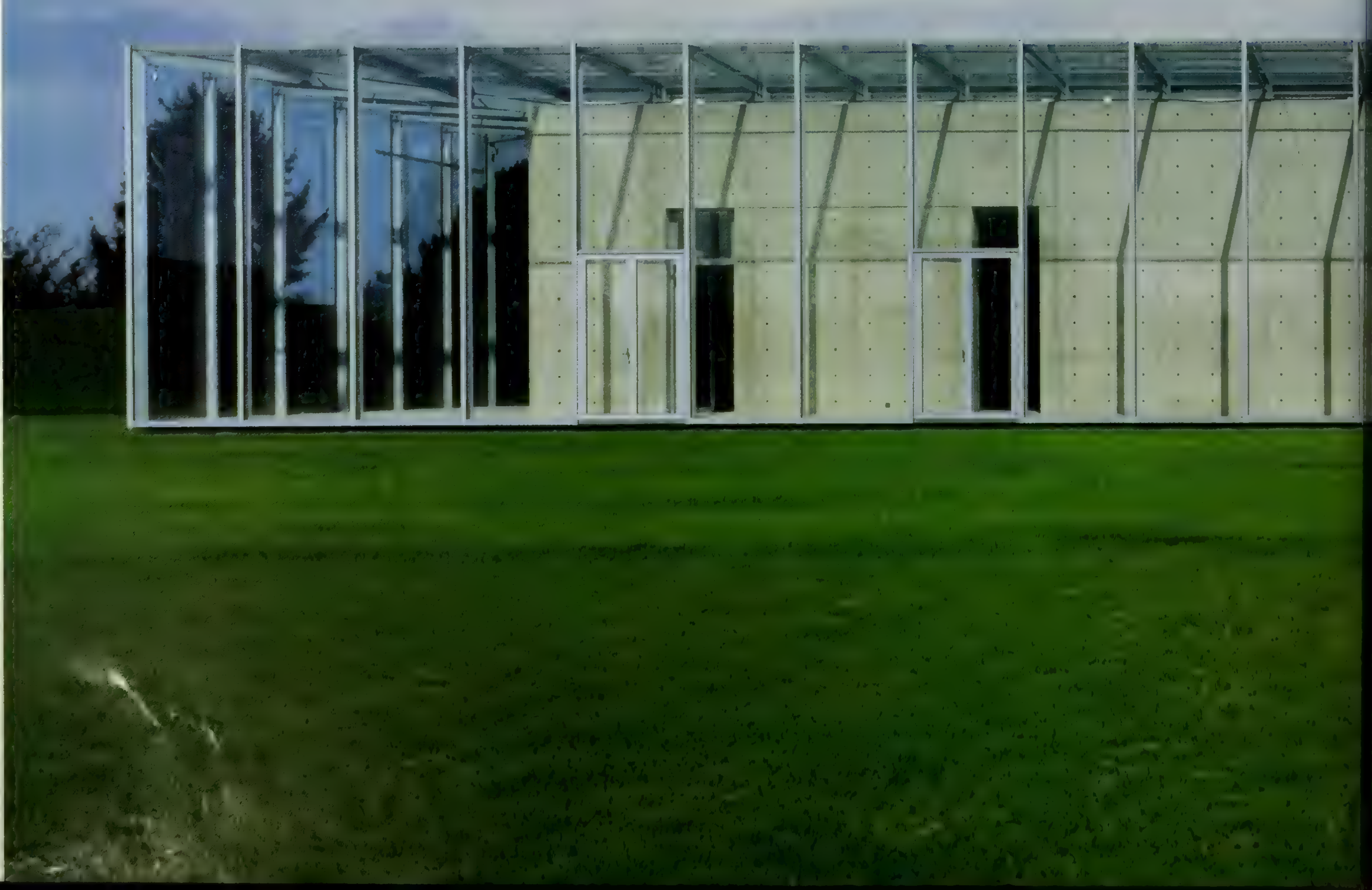
Lighting: *Musco; Louis Poulsen; Bartco; Bega; safe-t-lite*

For more information on this project, go to Projects at **www.archrecord.com**.

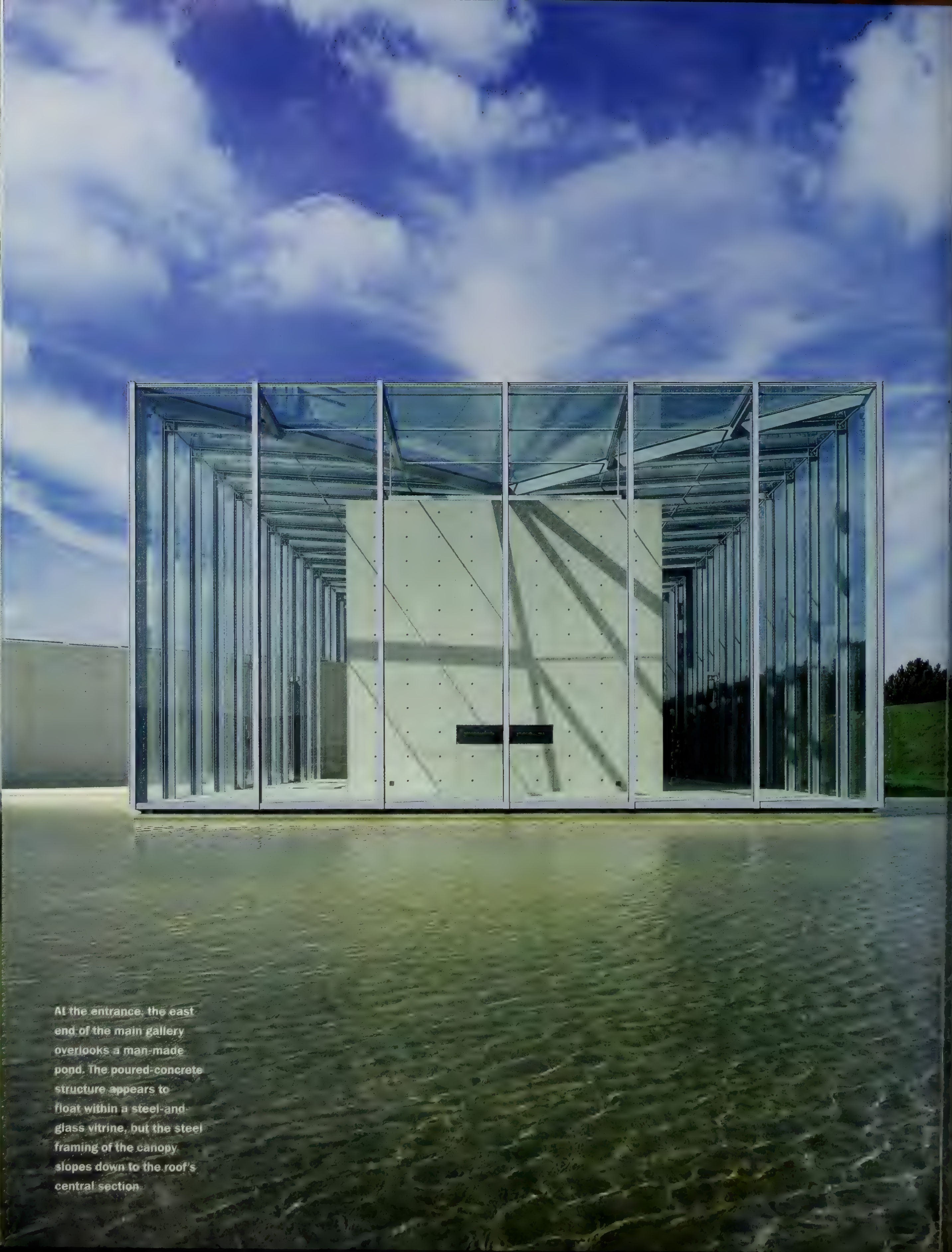
The museum (this page), located on a former NATO missile base, near Düsseldorf, is part of an art park. A stair (opposite) connects to half-buried galleries angled off the main glass-enclosed gallery.



1. *Langen Foundation*
2. *Pond*
3. *Gateway*
4. *Sculpture (Erwin Heerich)*
5. *Sculpture (Katsuhito Nishikawa)*
6. *Seminar building*
7. *Lecture hall*
8. *Biophysical Institute*
9. *Earth berm*

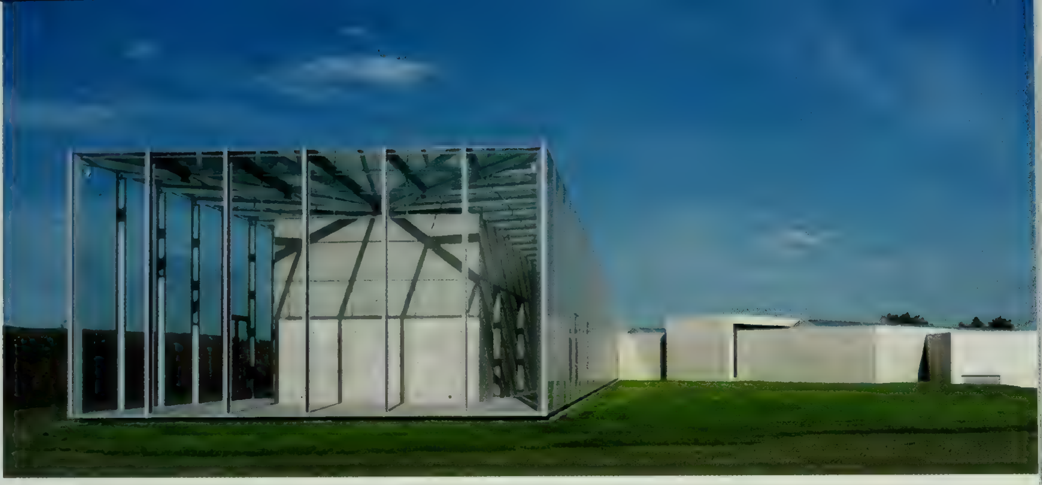


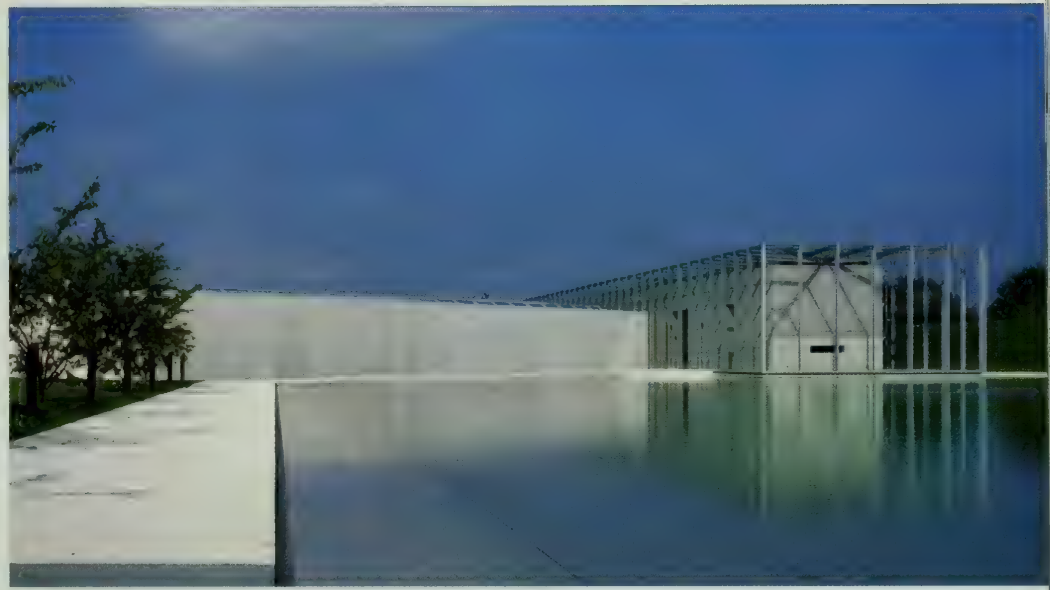
Tadao **Ando** explores the picturesque qualities of architecture and landscape in the **LANGEN FOUNDATION** outside Düsseldorf



At the entrance, the east end of the main gallery overlooks a man-made pond. The poured-concrete structure appears to float within a steel-and-glass vitrine, but the steel framing of the canopy slopes down to the roof's central section.

The galleries for Modern art, angled off from the south side of the main pavilion (right), seem to erupt from the ground. The entrance path to the museum (below right) edges the man-made pond at the pavilion's east end.





By Suzanne Stephens

It may strike some as a bit ironic to speak of the picturesque in discussing a museum executed by a Japanese architect for a defunct NATO base in Germany. Yet that description easily comes to mind when first viewing the Langen Foundation, a small, 32,635-square-foot, concrete museum designed by Tadao Ando for an art park near Düsseldorf. Although several centuries have passed since the term *picturesque* came into usage in England, it can still be applied today.

In the latter part of the 18th century, architects adroitly placed follies and temples on the informal grounds of country houses in a manner that conjured up associations with idyllic landscapes in Renaissance paintings. Here, the Langen Foundation takes us back to that time by virtue of its placement within a renewed pastoral setting. The picturesque reemerges with a modern twist through Ando's deployment of geometric forms in nature, and his attention to the kinesthetic experience of the visitor moving through the varied spaces.

You discover the Langen Foundation almost by surprise, apprehending the museum as a series of fragments that come together in a unified whole as you proceed through it: Ando has separated two wings, slightly elevating one, which is 245 feet long, to appear like a Classical temple floating above a lawn. The other, a squared U-shaped structure, is embedded 20 feet into the earth as it angles off one side of the first wing. This secondary form, where long galleries are topped by glass skylights, appears to be a casual series of nesting concrete boxes that push up about 11 feet above grade. The circulation path through the two connected but discrete structures takes the visitor on an episodic procession that is as clear and direct as it is unexpected.

The physical environs of the museum in its location in Neuss, Germany, appears at first to be an irrational jumble: Roads and signage through the forests, pastures, and small villages in the area make it hard to find the museum itself, not to mention the 32-acre former missile base it occupies. Known as the Raketenstation, the missile launching facility ceased operation in 1993. Two years later, it was annexed by the Hombroich Museum Island, an adjoining art park almost 200 acres in size, which was founded in 1982 by the real estate developer and collector Karl-Heinrich Müller. Over those years, Müller had commissioned sculptor Erwin Heerich to design a series of taut rectilinear brick pavilions to house the artworks on the island. More recently, Müller enlisted more artists and architects—14 in all, including Raimund Abraham, Alvaro Siza, and Daniel Libeskind—to contribute designs to the combined Museum Island and Raketenstation, now called the Hombroich Kulturraum (Hombroich Cultural Space). In fact, Siza is designing an architecture museum on the missile base, which will open in 2007, along with a music studio by Raimund Abraham. Already two sculptors, Katsuhito Nishikawa and Oliver Kruse, have designed sculptures and other facilities on the site, where former barracks and officers' quarters

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Project: *Langen Foundation, Neuss, Germany*

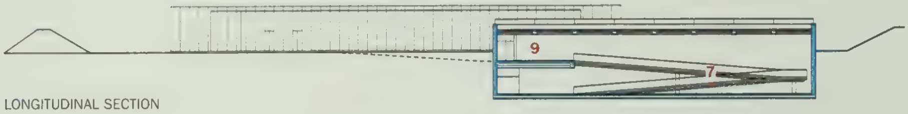
Architect: *Tadao Ando & Associates—Tadao Ando, Masataka Yano, Antoine Müller Moriya, design team*

Architect of record: *Takenaka Europe—Joachim Frey, Petra Sanden Wolfram Fischer, German design team*

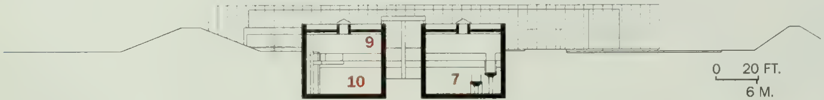
Owner's representative architect: *Andreas Hitpass*

Engineers: *Horst R. Grün (physics); Ingenieurburo J. Heibjes (structural); Ingenieurburo Bayr (mechanical engineer)*

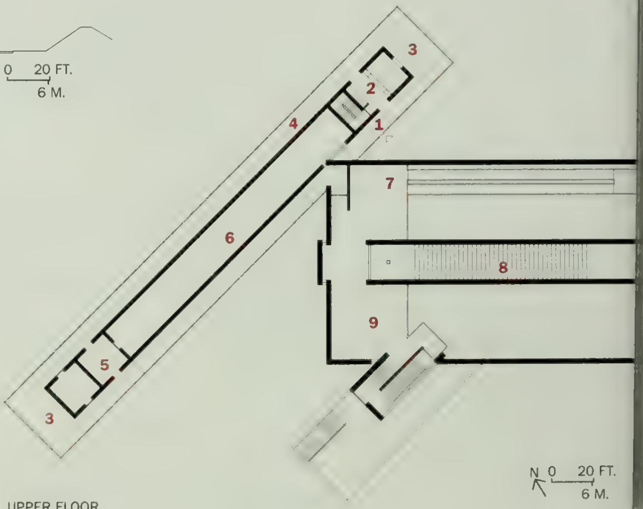
1. *Entrance*
2. *Admissions*
3. *Lounge*
4. *Walkway*
5. *Vestibule*
6. *Gallery for Asian art*
7. *Ramps*
8. *Exterior stair*
9. *Mezzanine/gallery*
10. *Galleries for Modern art*



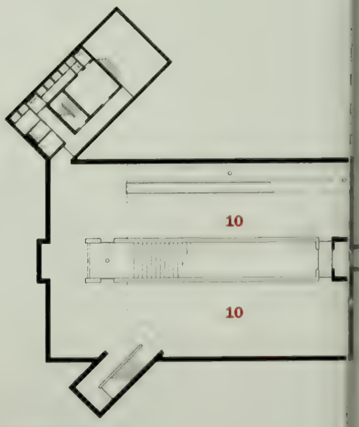
LONGITUDINAL SECTION



CROSS SECTION



UPPER FLOOR



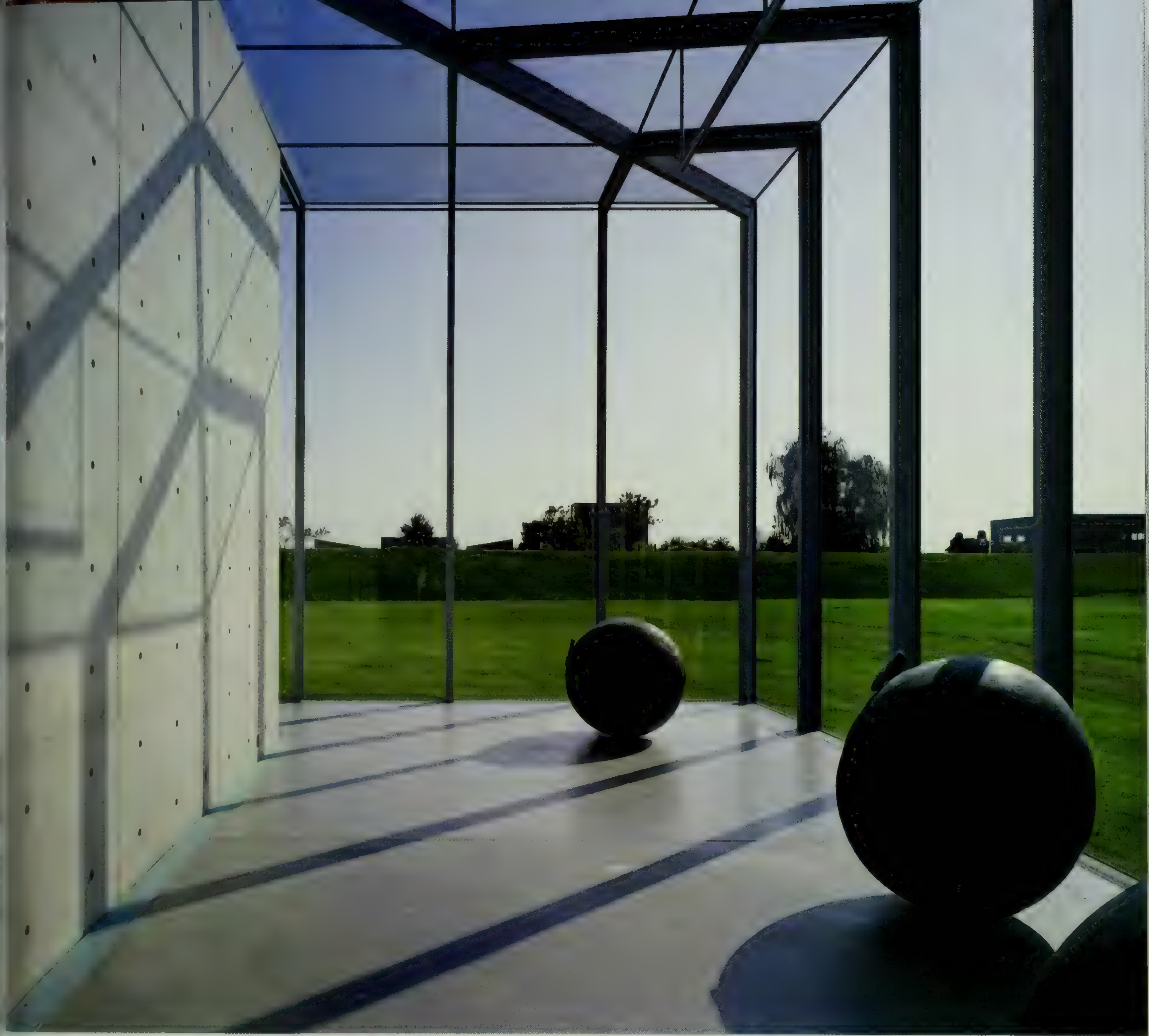
LOWER FLOOR

have been renovated for living accommodations, studios, residences, and research facilities for artists, musicians, and scientists.

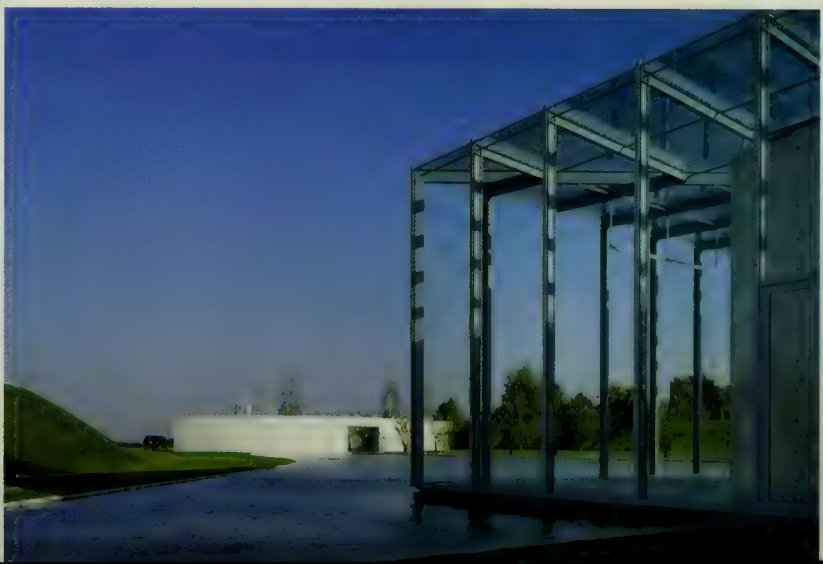
In addition, another 1,040 acres of land is being planned for an experiment in living with nature, where architects and artists from this list each envision his or her own program and its accompanying design. This latter effort, coordinated by the Berlin architectural office of Hoidn Wang Partner, is known as the "Hombroich spaceplacelab," and requires that at least 90 percent of each site be left for nature.

Ando got involved with the art program at Hombroich through the instigation of Müller, who knew of Ando's museums in Japan and the United States [Record, March 2003, page 98; May 2002, page 171]. Ando's crafted concrete geometric forms interact compellingly with light, water, and earth in a manner that fits in with the Hombroich identity. In 1995, Ando designed an art pavilion for Müller on the former missile base; it appealed to another German art collector, Marianne Langen, who was searching for a home for the art that she had amassed with her late husband, Viktor, a businessman, which they had housed in Switzerland. In 2002, Ando revised his scheme to include 9,688 square feet of exhibition space for the Langens' 500 works of Japanese art, dating from the 12th to the 19th centuries, and about 300 works of Modern Western art by Cezanne, Warhol, and Rothko, among others.

Although the Langen Foundation, which opened in late 2004, abuts a cluster of buildings on the former base, it occupies its own precinct, surrounded by earth berms added by Ando, and is almost hidden from view. While the approach to the museum appears incidental, you soon find out it follows a clearly thought-out processional route: A

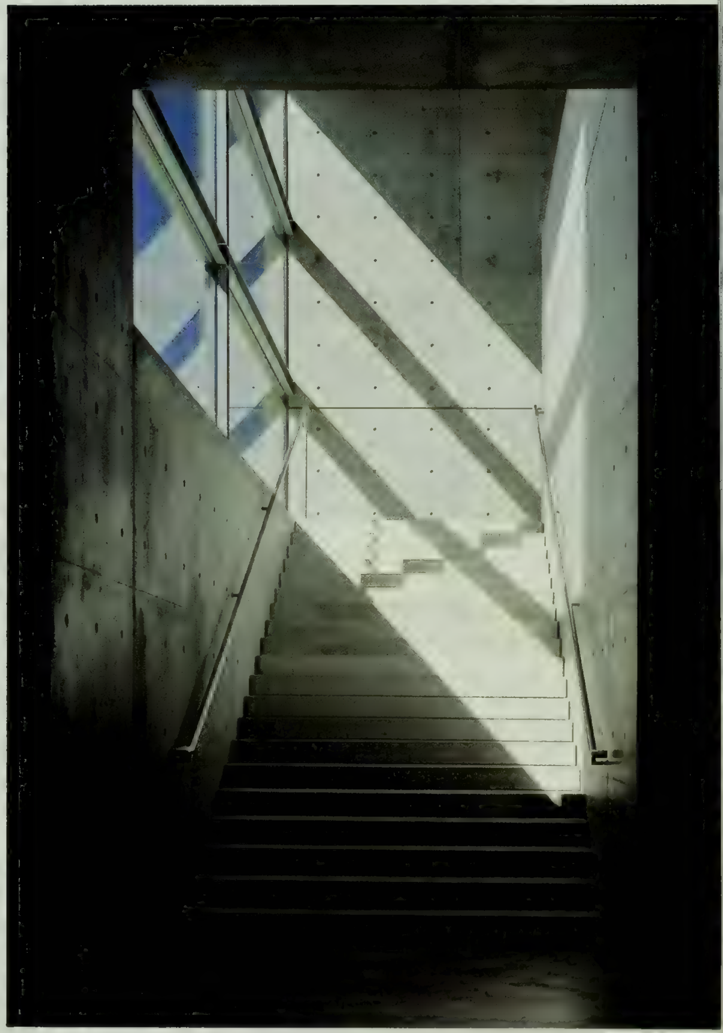


Beyond the earth berms surrounding the museum (above), visitors glimpse new and renovated structures of the former missile base, now part of an art park with living and research facilities. A path through the curved, freestanding, poured-in-place concrete entrance wall (at center, right) leads around the pond to the main gallery, where a glass portico (opposite and above) displays sculpture by Mimmo Palladino.



The main entrance in the south portico leads to the admissions alcove (above), and beyond that to the north portico.

The two below-grade galleries for Modern art are reached by ramps from the mezzanine (above right). By walking through a connecting link, visitors arrive at the 22-foot-high second gallery (above left). A stair under the projecting mezzanine balcony leads back up to the south lawn (right).



path leads through a large, rectilinear opening carved out of a curved, freestanding, poured-in-place concrete wall, past an irregularly shaped pond, to an unprepossessing entrance near the pristinely glazed, elegant end porch of the rectilinear temple.

Wrapped by glass-and-steel porticos and canopies on all four sides, the poured-concrete structure appears to be contained within a freestanding vitrine. (In actuality, the glass canopy structure angles down to the center of the roof, where it is anchored in two parallel concrete troughs that each flank a gabled skylight forming the roof's spine.) Ando compares these glass-and-steel porticos to the *engawa*, a terracelike space n a Japanese house that mediates between the interior and the outside. At the Langen, both north and south porticos provide long passageways enclosing the cella—the inner sanctum of this temple. Here, a long, dimly ighted gallery contains Japanese scrolls, screens, and other artifacts mounted in a somber, sepulchral setting.

On the south side of the building, the additional galleries for Modern art jut out of the ground at a 45-degree angle and are connected to the main gallery by a ramp at the east end of the south portico. By walking down the ramp, you find yourself suddenly on a mezzanine overooking two dramatic, double-height galleries, illuminated by skylights and cleaved by an expansive exterior, concrete stair. The light admitted through the gabled, louvered and glazed monitors to these subterranean galleries bathes the spaces in an even glow. Too even, perhaps. (Although Ando calls these "dynamic" galleries, in contrast with the "still" gallery in the main museum wing.) Much of the quietness results from the scale of the relatively small artworks mounted against the large expanses of drywall, so that the art tends to be overwhelmed by the sheer volume of space in the 26-foot-high galleries. Since the exhibition installation does not depart from decades-old Modernist conventions of display, the dwarfing of art is all the more noticeable. (The exhibition *Graphic Works of the Avant-garde, 1918–1934*, on view until August 22, is absorbing, but tends

The north portico (opposite) takes visitors to a large porchlike space at the west end of the main gallery. A mezzanine level (right) overlooks the two sunken galleries and connects to an interior ramp in the first one. Slots of glass articulate the various concrete masses, and a large cross-mullioned window (below right) looks out to the broad exterior stair cleaving the two galleries.

to look like so many postage stamps on the wall.)

It soon becomes clear that the most interesting part of the museum experience is the actual processional path, that is, moving through Ando's serene, stunning exercise in concrete and glass. The totality well illustrates Ando's remark that he likes to site his buildings in nature with "a labyrinth inside," which has its "own nature"—particularly fitting here, since "real" nature outdoors looks a lot like some of the countryside of Ando's native Japan, with a similar mix of clouds and sun. If one is struck more by the architecture than by the actual art installation, however, it might be due to the absolute, pristine nature of the concrete itself, always basic to Ando's work. Here he has achieved a buttery smoothness using a resin-coated plywood formwork.

Although the finished result appears more like a refinement of Ando's vocabulary than an experimental departure from it, his architecture does remove you from the quotidian by virtue of its episodic variations. This newer version of the picturesque has evolved from the 18th-century notion in the sense that the kinesthetic experience of the observer is now more consciously identified as integral to aesthetic perception. And while Ando's geometries seem as Platonic as those found in 18th-century Neoclassical follies, his plans incorporate principles of asymmetry and collage along with a Classical organization. The modern attitude to the picturesque was astutely articulated by Anthony Vidler in 1982 in discussing another rectilinear work of architecture, Richard Meier's Hartford Seminary, in Connecticut. As Vidler wrote at the time in *Skyline*, an architectural newspaper, "Each functional element exhibits its difference, where the total idea of the institution must be pieced together by a moving observer." This piecing together, pointed out so long ago, is more dramatically developed in Ando's processional scheme for the Langen, which allows one to engage art, nature, and architecture. But that experience becomes more memorable than one's individual interaction with the artworks themselves in the museum's galleries. ■

Sources

Concrete: *Florack Bauunternehmung*

Plywood form work system: *Peri*

Steel structure for glazing: *Frenken & Erdweg GmbH*

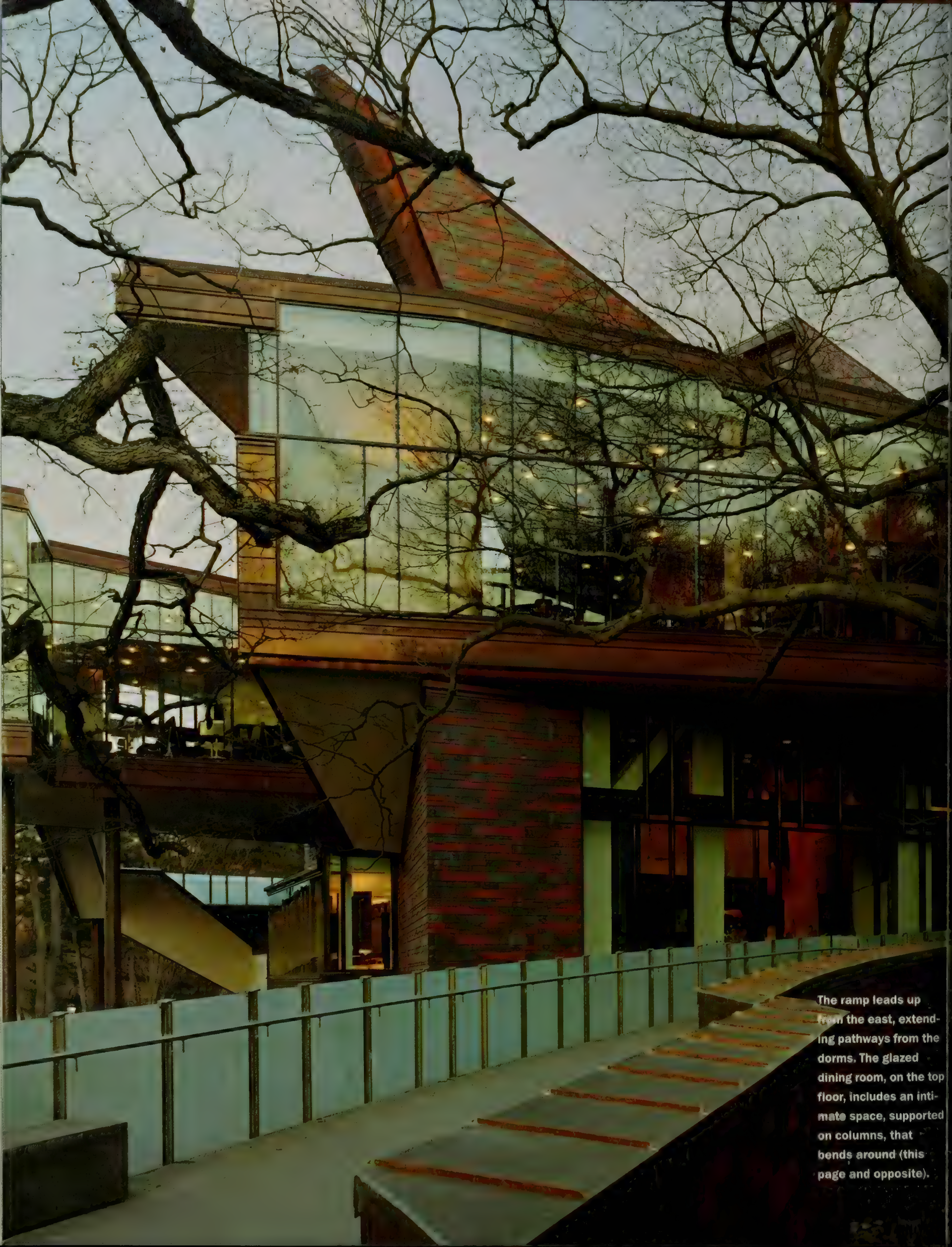
Glazing (veranda): *Glas Dönges GmbH; Fertigbauelemente Uniatowski*

Waterproofing for roof: *Pohl Bedachungen*

Millwork: *Schäfer Holzbearbeitung*

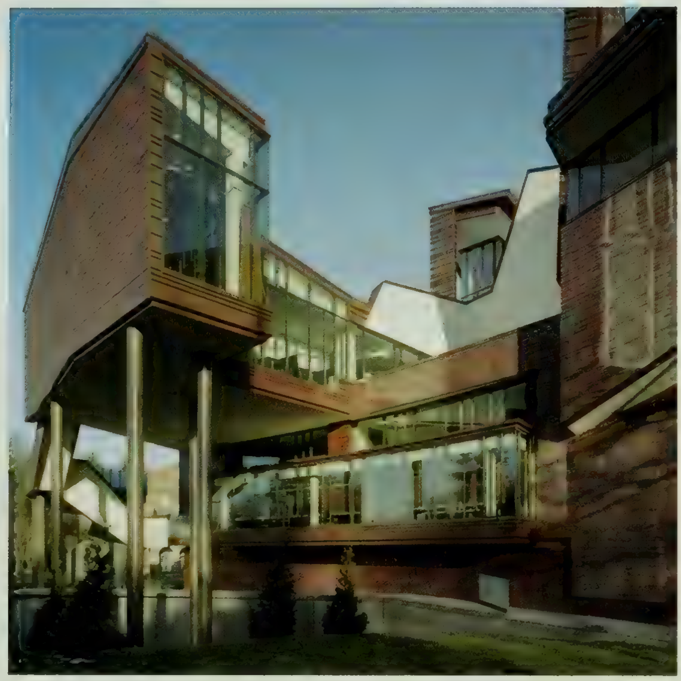
Pond equipment: *Anlagenbau GmBH*

For more information on this project, go to Projects at **www.archrecord.com**.



The ramp leads up from the east, extending pathways from the dorms. The glazed dining room, on the top floor, includes an intimate space, supported on columns, that bends around (this page and opposite).

Mack **Scogin** Merrill **Elam** angles its architecture toward the landscape and culture of Wellesley with the idiosyncratic **WANG CAMPUS CENTER**



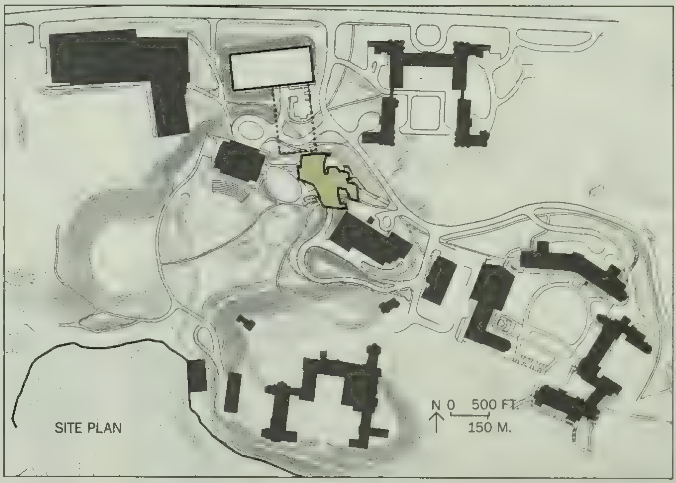
y Nancy Levinson

In the process of choosing an architect for the campus center at Wellesley College, the school administrators asked the short-listed firms not for conceptual sketches of proposed structures, but instead for analyses of potential sites. The emphasis on landscape instead of uildings might seem unusual, but at Wellesley, a passion for its 450-acre ampus—a wooded terrain of rolling hills, gentle plateaus, and flat meadows long the northern edge of Lake Waban—dates to the school's founding in he 1870s. In 1902, Frederick Law Olmsted, Jr., as a consultant to the college, vrote a lengthy letter describing the campus as "not merely beautiful but vith a marked individual character not represented so far as I know on the rounds of any other college in the country." The letter, urging the administrators to respect the "exceedingly intricate and complex topography" by uilding along ridges rather than across meadows, would profoundly affect Vellesley's physical development. The latest evidence of Olmsted's beneficial nfluence is the Lulu Chow Wang Campus Center.

Designed by the Atlanta firm of Mack Scogin Merrill Elam rchitects, the 50,000-square-foot building rises on an escarpment overlooking a cattail-filled meadow that slopes down to the lake—a setting the reat landscape architect would surely have approved. Moreover, as Mack cogin, AIA, explains, the Olmstedian philosophy and its particular meaning t this women's college west of Boston have informed not just the building's lacement, but also its design. "Wellesley has always rejected the idea of mposing any abstract or geometric order on the land," says Scogin. "They've hosen instead to value the natural and the irregular." As a result, you come o understand this campus neither easily nor quickly, but gradually, as you neander along its paths and tramp its hills and valleys. And so, Scogin adds, Our idea was to embody in this project the values of the landscape—to nake a place that draws you in, a place that you discover slowly, over time."

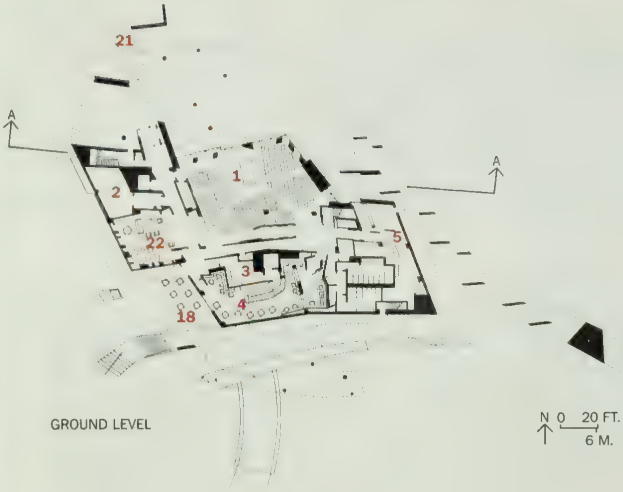
The architects' focus on a process of discovery resonated with Vellesley's leaders, who envisioned the building's program as open-ended nd evolving. The clients admit that they were clearer about what they did ot want than what they did: They did not want to pander to national ampus-consumerist trends with a building devoted to cappuccino and ock-climbing walls. As Wellesley president Diana Chapman Walsh notes, We didn't want a place that was more about marketing than about enhancing campus life." Ultimately, the college leaders decided on a nonprescriptive rogram: The center would house the student post office, a bookstore, and

Vancy Levinson, based in Massachusetts, is a contributing editor to RECORD.



Project: *Lulu Chow Wang Campus Center and Davis Garage, Wellesley College, Wellesley, Massachusetts*

Architect: *Mack Scogin Merrill Elam Architects—Mack Scogin, AIA, Merrill Elam, AIA, principals; Timothy Harrison, AIA, Christopher Agosta, AIA, David Yocum, AIA, Kimberly Shoemake-Medlock, Jeffrey Collins, Jennifer Pindyck, Barnum Tiller, Christian Rice, Michael Wirsching, Jennifer Hurst, John Trefry, Stephen Trimble, Kevin Gotsch, Andrea Korber, Jane Lee, Ashley Moore, Margaret Fletcher, Brian Bell, AIA, Trey Lindsey, Sophia Greenbaum, Helen Han, Ted Paxton, design team*



GROUND LEVEL

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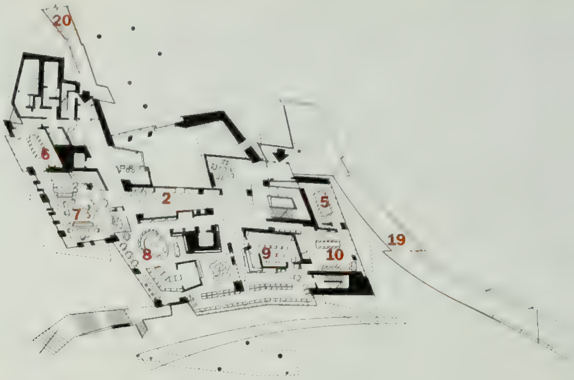
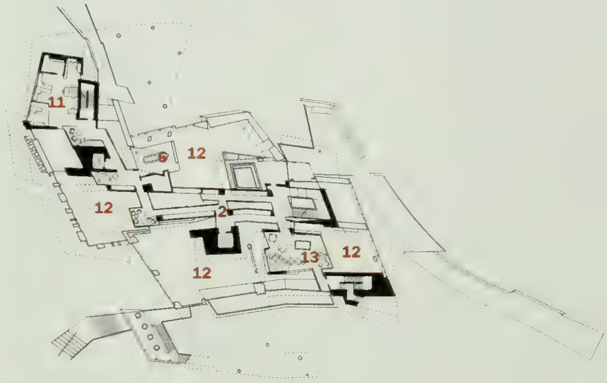
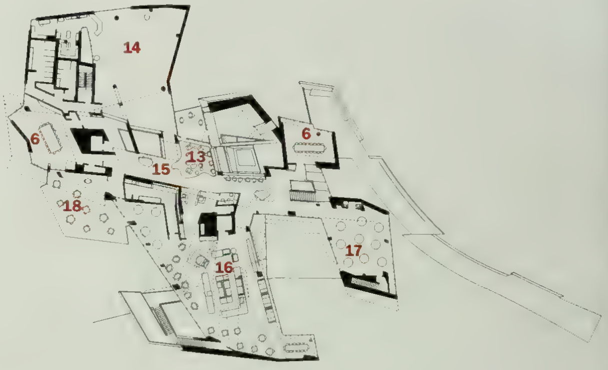
6 M.



SECOND LEVEL



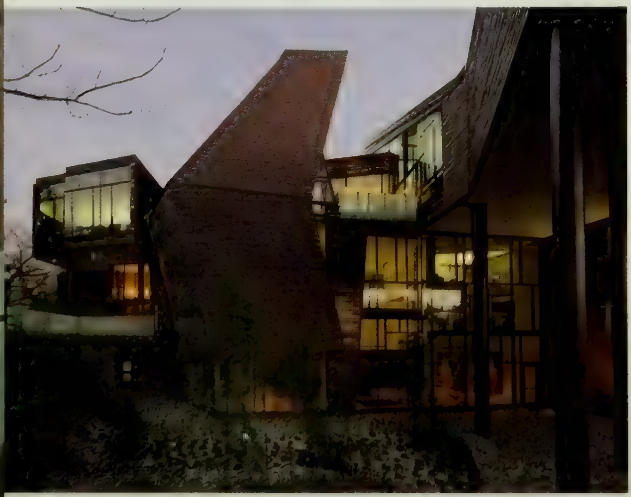
MEZZANINE LEVEL

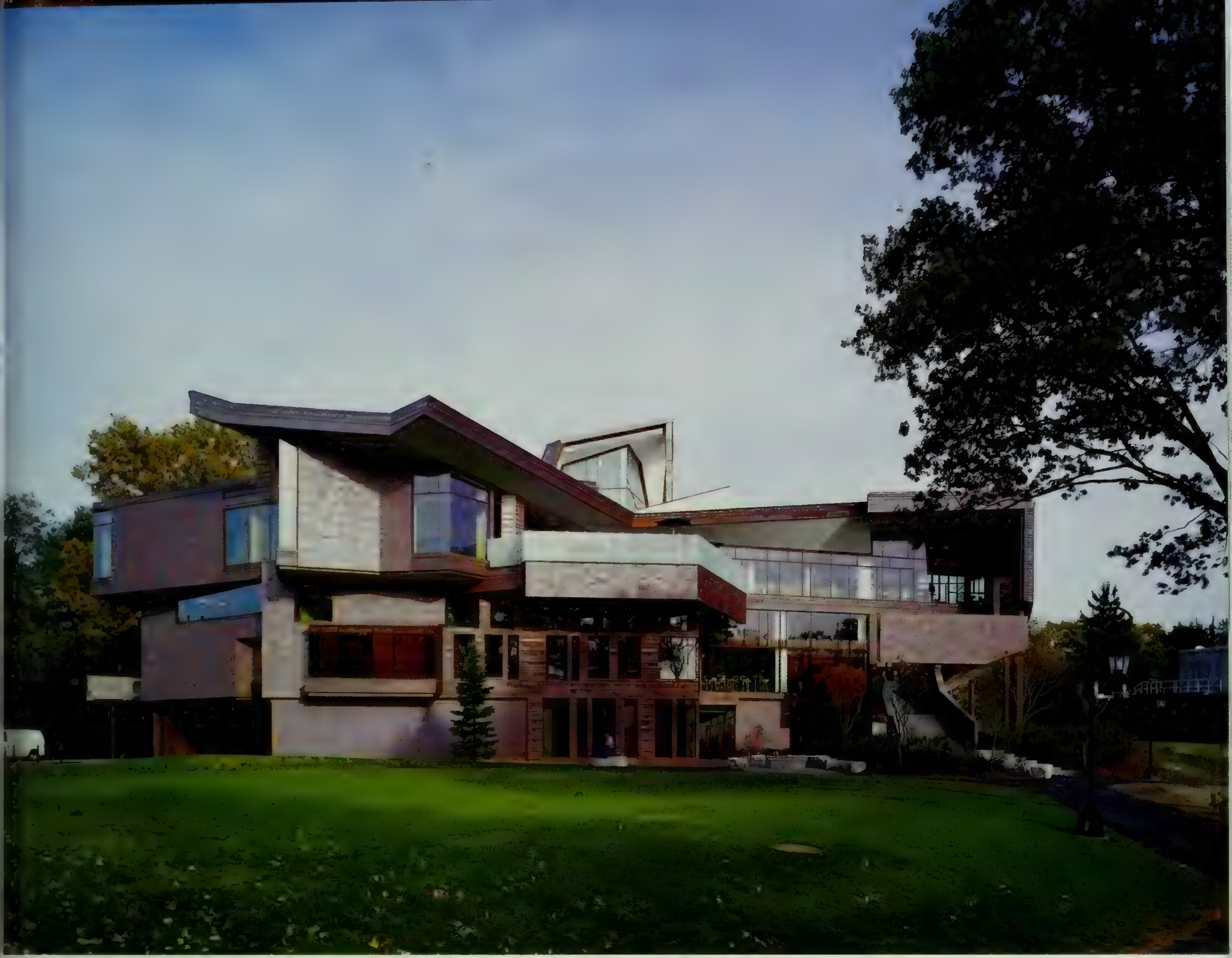


TOP LEVEL

1. *Commons*
2. *Storage*
3. *Catering kitchen*
4. *Pub and bistro*
5. *Café*
6. *Meeting*
7. *Lobby/forum*
8. *Convenience store*
9. *Post office*
10. *Student resource room*
11. *Administration*
12. *Open to below*
13. *Lounge*
14. *Bookstore*
15. *Retail*
16. *Serving*
17. *Dining*
18. *Terrace*
19. *Ramp*
20. *Bridge to sidewalk*
21. *To parking garage*
22. *Multipurpose*

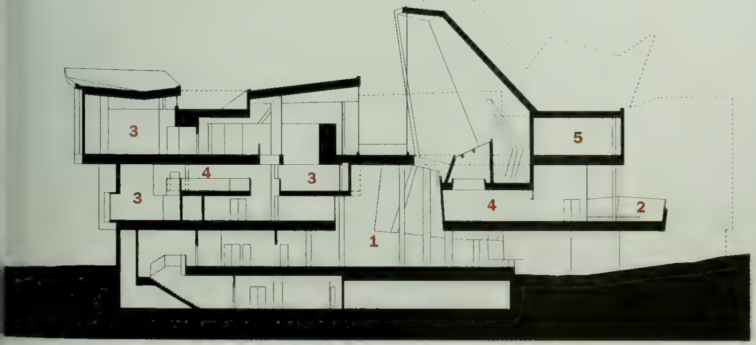
A bent, boomerang-shaped wall (below left) partially encloses the light scoop that directs rays into the commons. Another exuberantly angled and gestural wall (below right) embraces a small garden that extends between two dining areas on the top floor. This planted bed offers visual access only.



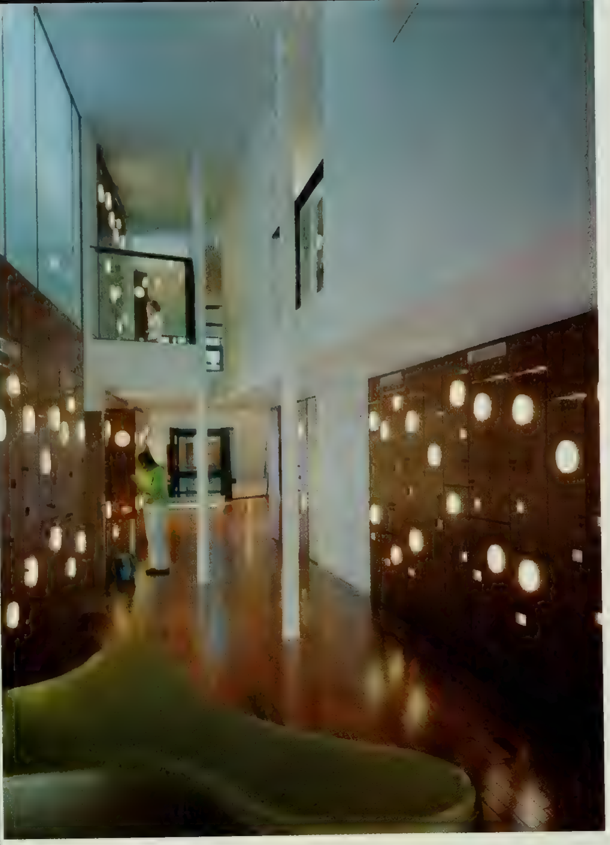


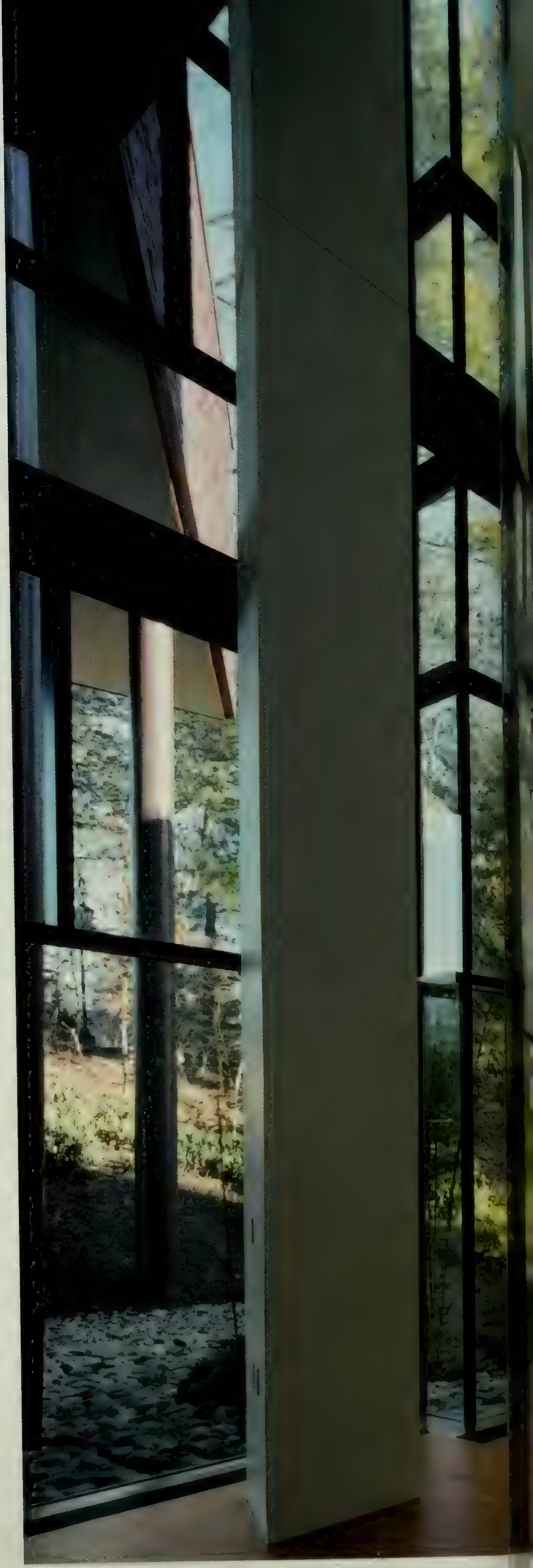
1. *Commons*
2. *Terrace*
3. *Meeting*
4. *Student lounge*
5. *Dining*

A dramatic light scoop crowning the building (above) illuminates the north-facing commons, on the ground floor. With a 1923 building by Cram (far left in photo, right), the Wang helps define a green space.



CTION A-A



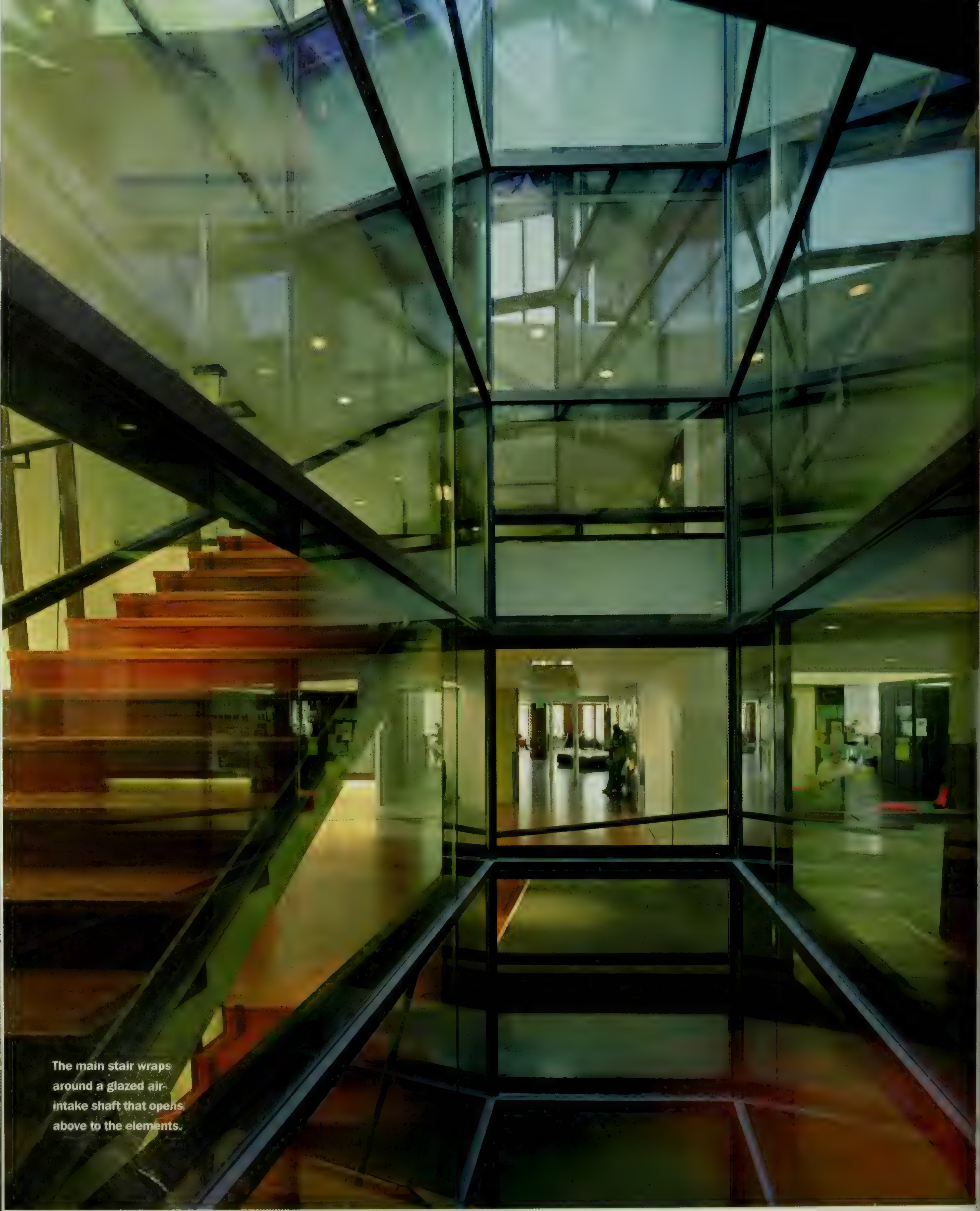


The two-story-high commons, or great room, features a light scoop and a Mondrianesque wall of windows (right). Wood storage cabinets, lit from within, glow through disk-shaped lenses (left).

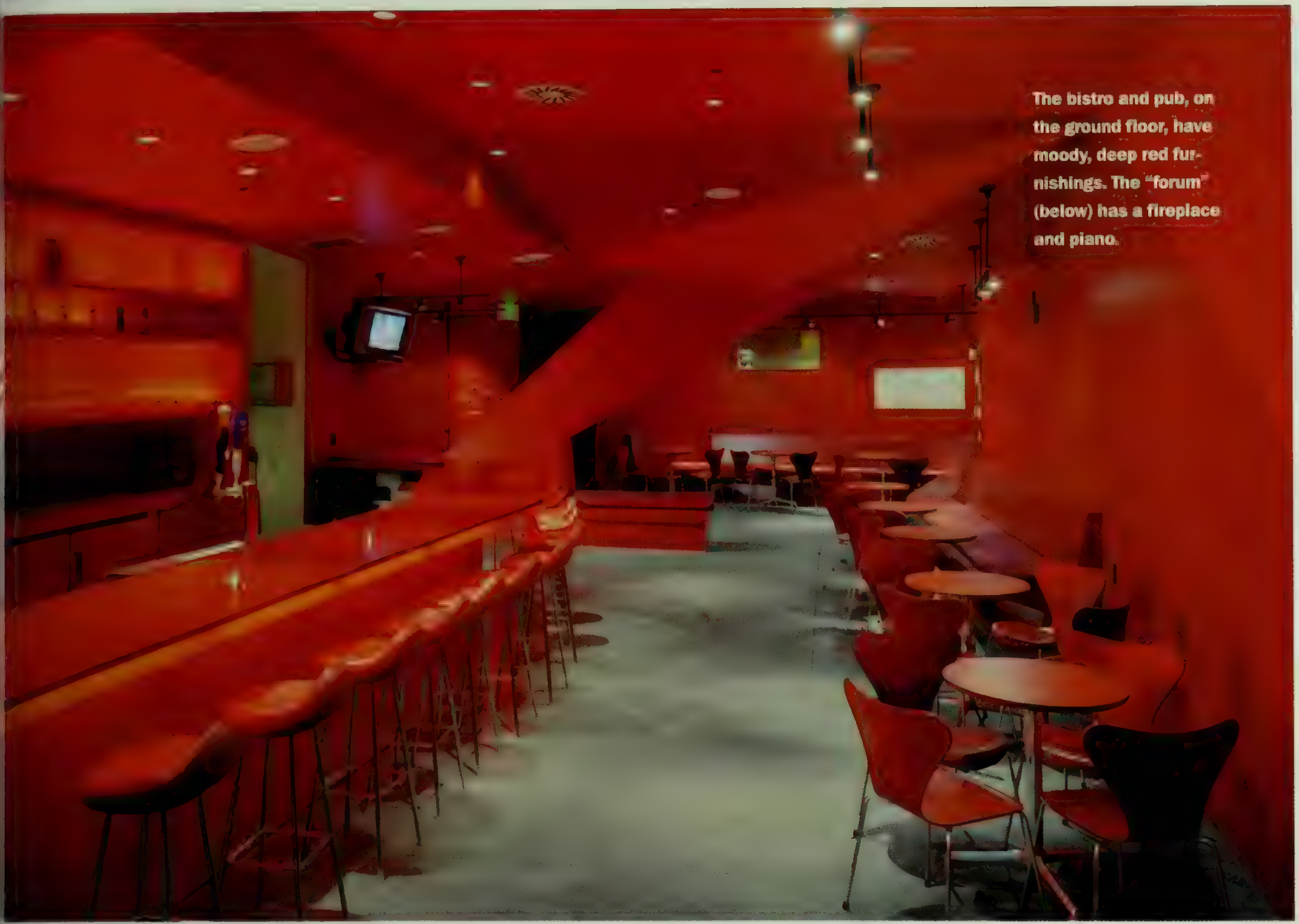
other spaces where the entire community could socialize. "We didn't want any group to feel it 'owned' the center," says Patricia M. Byrne, vice president for administration and planning. "The Wang is for everyone at Wellesley."

It seems unlikely that anyone on campus regrets the lack of climbing walls (and happily, there is no lack of cappuccino). The architects have succeeded in making the center as rich and idiosyncratic as the landscape. Unfettered by an elaborate program, Scogin and Elam created four intersecting levels of spatially graceful and diversely scaled spaces for eating, drinking, meeting, studying, and relaxing. The ground level includes an atmospheric bistro and pub, with deep red furnishings, and a double-height commons, with a dramatic four-story light scoop. The second level has a wood-paneled living room with a fireplace and, nearby, a coffee bar. The mezzanine has a lounge with a pool table and flat-screen TV; and the top level, two airy dining rooms and a southwest-facing terrace. Some spaces are linked visually by interior windows, or vertically by overlooks and balconies. The corridors are lined with wood-paneled storage cabinets (for campus groups). The cabinets are lit from within, glowing through translucent disks on their doors that provide illumination and generate a playful pattern.

The building's exterior is no less expressive. Viewed from any direction, the Wang is an exuberant and asymmetrical (to say the least) composition of jutting volumes, canted walls, swooping ramps, and tilting roofs, all articulated in slate, glass, and copper. Those who prefer their Modernism crisp and Miesian might wonder what all the zigzagging is about, but the design decisions are neither arbitrary nor whimsical. The architects have shaped the building to fit a complicated site, with each elevation responsive to its particular setting. To the north, the Wang is on axis with the campus's main automobile entrance, and its scale corresponds



The main stair wraps around a glazed air-intake shaft that opens above to the elements.



The bistro and pub, on the ground floor, have moody, deep red furnishings. The "forum" (below) has a fireplace and piano.

ccordingly—visitors, faculty, and staff, who usually arrive by car, cross a ootbridge (which connects to a new, 563-car garage, also by Scogin and lam) and enter a lobby with an inviting glimpse of the coffee bar; to the east re a series of footpaths, the main approach from the dorms, and here you ncounter first a pedestrian ramp, arcing into the landscape and drawing ou up into the building. To the west is Alumnae Hall—designed in 1923, in aguely Jacobean style, by Ralph Adams Cram—and here, the Wang's height nd mass respond to the older building; together the structures frame a reen courtyard. To the south, the meadow sweeps down toward the lake. At his point, the Wang becomes a large-scale composition, configured to bring n light and, says Scogin, "hold its own against the landscape." (Michael Van alkenburgh Associates remediated the meadow from a brownfield, and lesigned its landscape.) As Wellesley assistant art professor John Rhodes vrites in the college magazine: "The more one encounters [the building] in erson, the more one appreciates its responsiveness to its setting."

The Wang has already become central to campus life. It has also ecome another example—along with Rafael Moneo's Davis Museum and ultural Center and Paul Rudolph's Jewett Arts Center—of Wellesley's will-ngness to embrace contemporary architecture. Which, on a New England ampus with its share of Collegiate Gothic, "is not always an easy sell," as yrne says. But the college planners persisted, and through a thoughtful lesign process, have built a place of its time, and emphatically of its place. ■

Sources

Curtain wall: *Wausau*

Roofing: *Sarnifil Energy Smart (PVC); American Hydrotech (green)*

Suspension grid: *Armstrong*

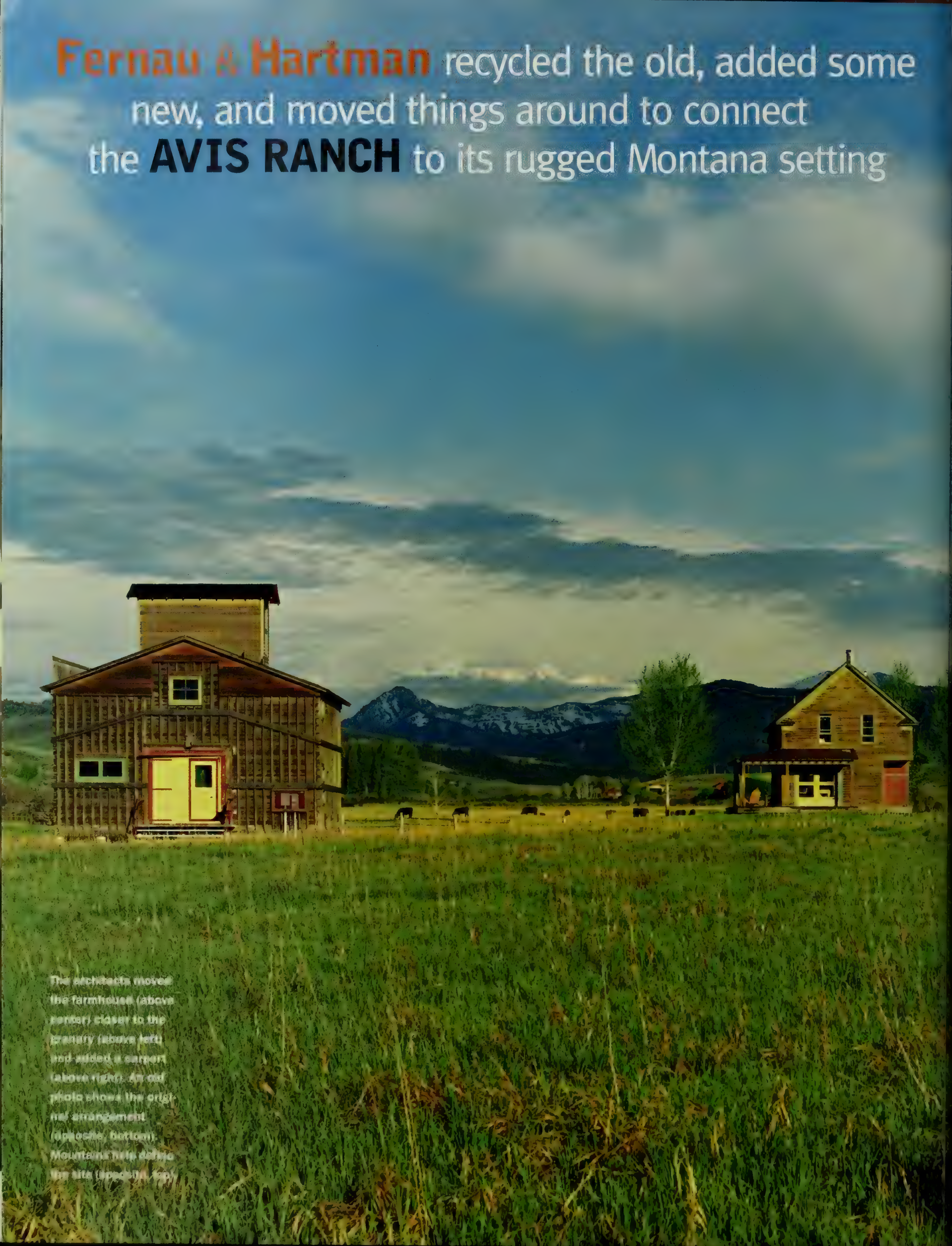
Paints and stains: *Benjamin Moore*

Wood paneling: *Smith & Fong Bamboo*

Furnishings: *Herman Miller, Steelcase; Edra; Dryade; Zanotta; Stylex; Frity Hansen; Thos. Moser; Frighetto; B+B; ICF; Vecta; Cassina; Werndl; Moroso; Baleri Halia; Nienkampe; Metro*

For more information on this project, go to Projects at **www.archrecord.com**.

Fernau & Hartman recycled the old, added some new, and moved things around to connect the **AVIS RANCH** to its rugged Montana setting



The architects moved the farmhouse (above center) closer to the granary (above left) and added a carport (above right). An old photo shows the original arrangement (opposite, bottom). Mountains help define the site (opposite, top).

PHOTOGRAPHY: © TIMOTHY HURSLEY, EXCEPT AS NOTED; JUDY K. LAWRENCE (BLACK-AND-WHITE PHOTOS)

By Clifford A. Pearson

On a ranch with 17,000 acres of spectacular Montana scenery, why would you build your country house on the lowest part of the land, close to the road? Why split it up into a series of small buildings, rather than gather family and guests under one roof? Because you're thinking like a farmer, not an interloper, explains Richard Fernau, FAIA, whose firm, Fernau & Hartman Architects, designed a retreat in southern Montana for Anne and Greg Avis and their family.

You don't have to drive far along the graded-but-unpaved road linking the Avis Ranch to the nearest town (Clyde Park, population 335) to see what other wealthy newcomers have built for themselves. Some 5 miles down the road, an enormous pile of styles and materials masquerading as a second home stands on a ridge, commanding an impressive view (and ruining it for everyone else).

Over the course of nearly 10 years, Fernau and his partner Laura Hartman, AIA, have helped the Avises build a ranch piece-by-piece, so that each little structure fits with the land as well as its neighbors. Recycling old buildings, salvaging old materials, and adding new structures, Fernau and his firm designed a complex that seems as casual and rugged as a group of cowboys at the end of a long day on the trail. But, in fact, the project embodies a painstaking approach to design that included consideration of environmental, social, and aesthetic issues. In the process, the architects and their clients changed a lot more about the buildings than is initially apparent, and—equally important—changed themselves as well.

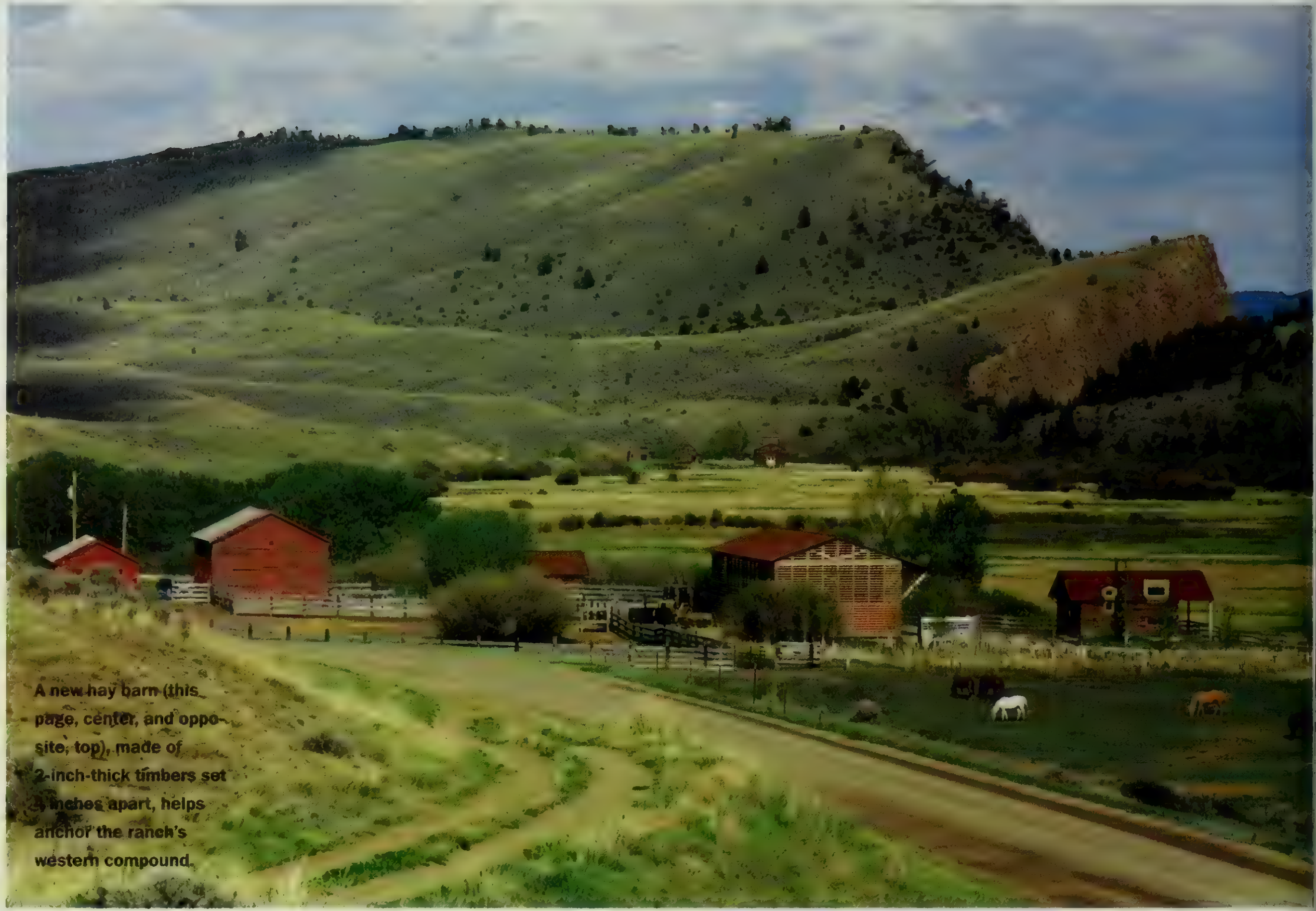
Project: *Avis Ranch, Clyde Park, Montana*

Architect: *Fernau & Hartman Architects—Richard Fernau, Laura Hartman, design principals; Jenee Anzelone, Sean Gilmore, Randy Hellstern, Leyla Hilmi, Peter Liang, Tom Powers, Aaron Thornton, design team*

Engineer: *Bridger Engineering—Ed Matos and Brad Ebel*

Consultants: *Sandy Blake (landscape); Alice Prussin (lighting)*

General contractor: *Anzick Construction*



A new hay barn (this page, center, and opposite, top), made of 2-inch-thick timbers set 4 inches apart, helps anchor the ranch's western compound.

The first critical decisions were figuring out what to do with the dilapidated structures that came with the ranch and where to build what the Avises expected would be their new country house. For more than a year, the architects and clients studied the land and considered several locations offering stunning views of Ross Peak to the west or the range of mountains known as "the Crazies" to the east. "Our first inclination was to find the best spot on the land and put our house on it," recalls Greg Avis. Building there, though, would require adding a long driveway, extending water and electrical services, and disturbing the land. As the Avises considered their options, they lived in an uninsulated stucco house on the property, rode horses around the ranch, and got to know the land. In the meantime, Fernau advised "saving the old buildings, by slapping new roofs on them, then figuring out what to do with them later."

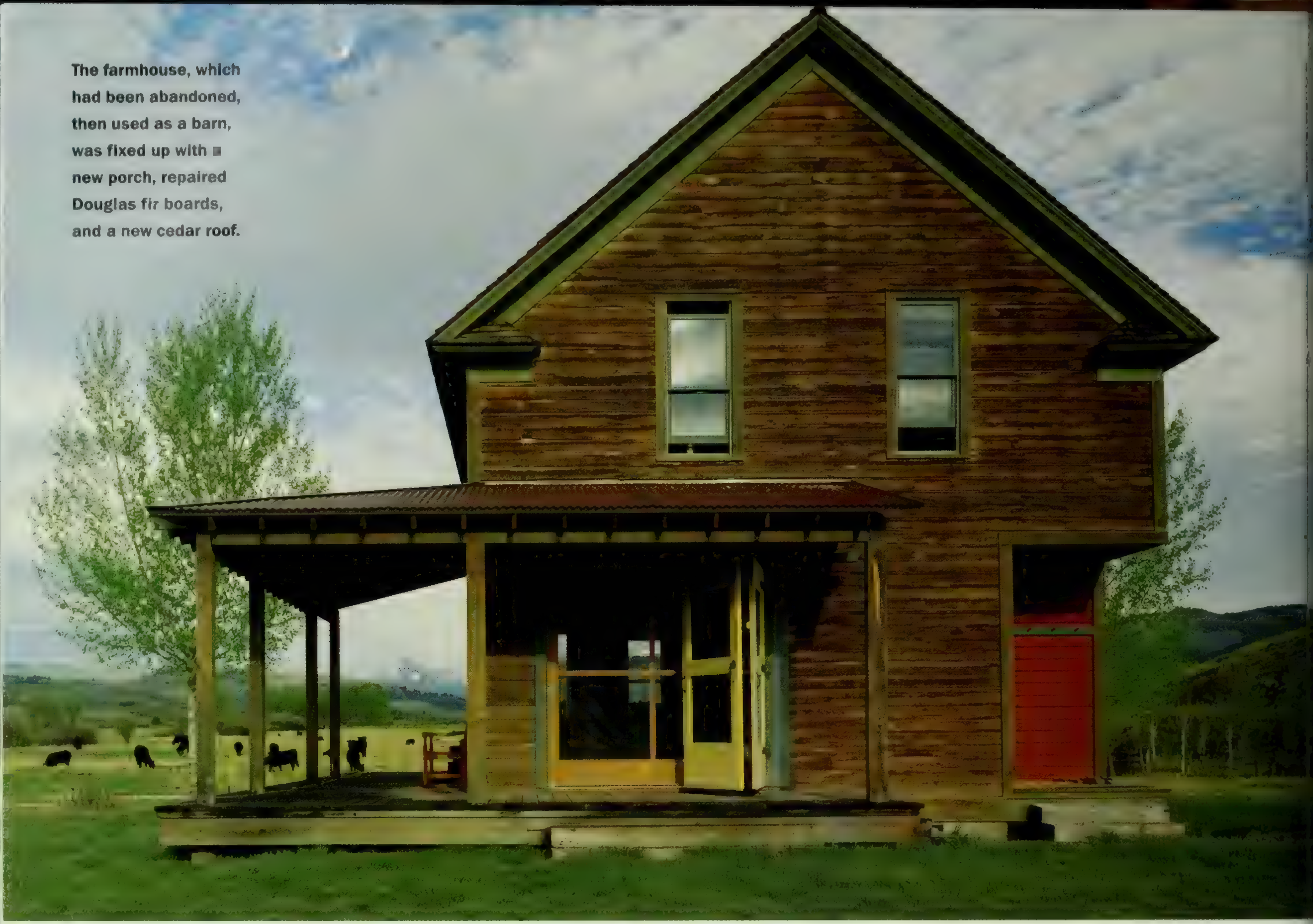
The old buildings fell mostly into two compounds about three-quarters of a mile apart. One compound had a weather-beaten granary and a small farmhouse, while the other encompassed some modest buildings, a pair of small stables, and an outhouse equipped with a three-hole latrine. As they studied the land, Fernau and the Avises became increasingly aware of how fragile the tough-looking environment really is and how important the ranch's unremarkable buildings were to the local people who drove by them every day. So much of the area's rural imprint had disappeared that the remaining barns and granaries were becoming increasingly precious.

Slowly, Fernau and his clients realized that the responsible approach to the project was "to think like a farmer," recalls the architect. "We asked ourselves, 'Where would the farmer put his house?' " Th answer was obvious: right where the existing farmhouse is, close to creek for water and to the road for easy access. Reusing the existing buildings also made sense as the participants' environmental ethos deepened

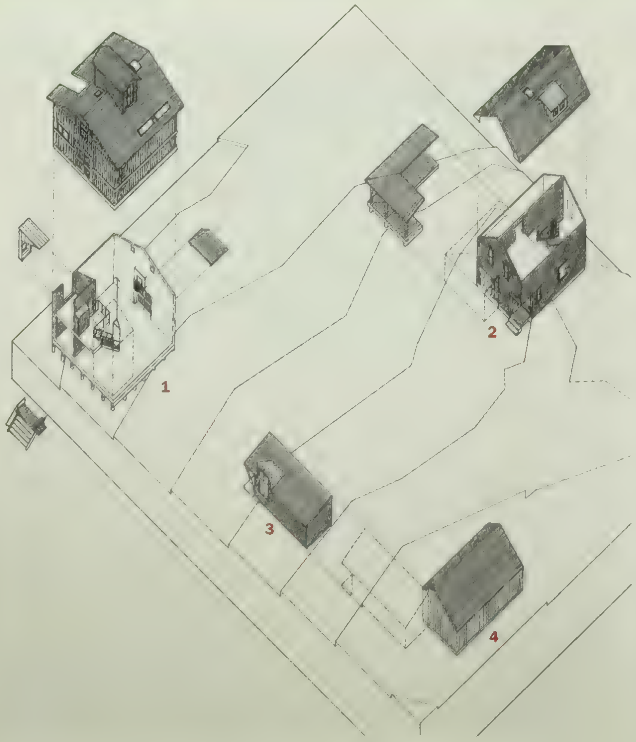
Fernau, however, didn't see the project as an exercise in histori preservation. As he worked on the buildings one at a time, he added ne features to some of them: dormers, porches, windows, and doors. He tor down the stucco house and built a new carport/toolshed. He picked up th farmhouse from its rotting wood foundation, poured a new concrete slab and replaced damaged wood siding with new boards of Douglas fir (sam as before). Inside, he created a modern house with a new kitchen open t the living and dining area and a palette of colors (including russet, mos and ocher) inspired by lichen that grow in the area. He restored the granary's distinctive wood-plank envelope, but moved the building closer t the farmhouse and rotated it 180 degrees because its west facade had bee battered by winds for nearly 100 years. He also added windows to the whe room at the top of the granary to bring more daylight inside. Where grai had once collected, he created an indoor basketball court (great on col winter days) and inserted a second floor with a bedroom and bath. H restored much of the granary's interior materials, used salvaged wood fro a granary torn down in another part of the state, and added new materia such as polished particleboard on two sides of the basketball court.

"I saw the project as a Rauschenberg or Schwitters collage explains Fernau. "You take some found objects, work with them, add t

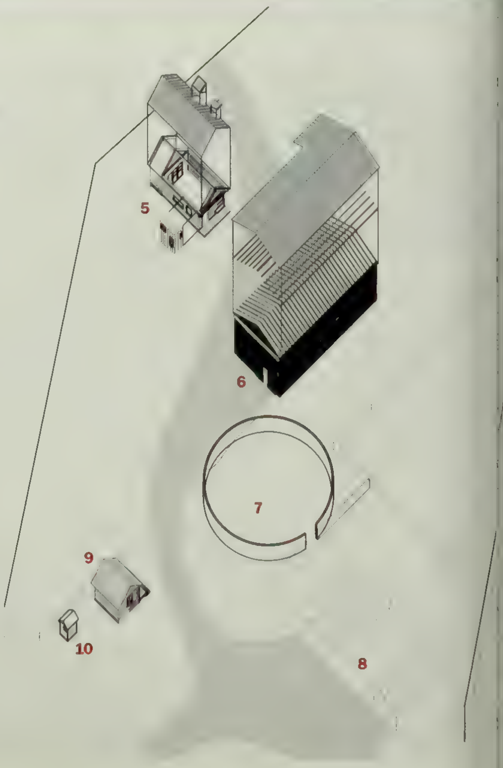
The architects converted a small granary into a 420-square-foot guesthouse (left in photo below), giving it a porch (bottom left) and a simple living space (bottom right).



The farmhouse, which had been abandoned, then used as a barn, was fixed up with a new porch, repaired Douglas fir boards, and a new cedar roof.



1. *Granary (converted old building)*
2. *Farmhouse (refurbished)*
3. *Toolshed (new)*
4. *Carport (new)*
5. *Guesthouse (refurbished)*
6. *Hay barn (new)*
7. *Corral (refurbished)*
8. *Stables (refurbished)*
9. *Office (refurbished)*
10. *Privy (refurbished)*

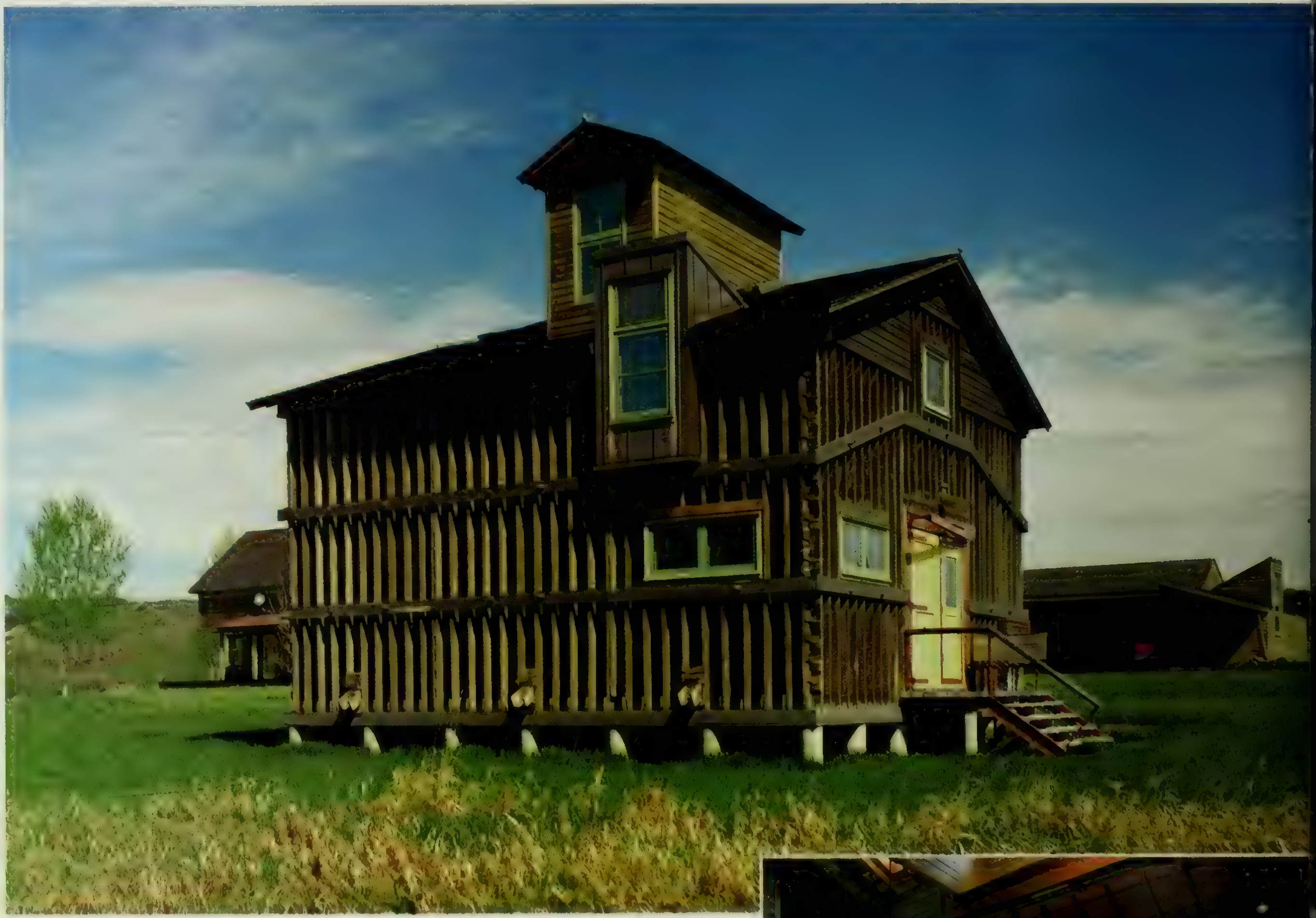


em, arrange them, and rework them." Like obert Rauschenberg and Kurt Schwitters, ernau established rules for himself—in this case, inimizing the impact on the land, recycling as any materials as possible, and using only natu- l ventilation. But aesthetic choices also played a le: This color looks better than that, and this set f proportions feels right for that room.

Of particular concern to Fernau was etting the relationship right between the vari- us buildings and between the two compounds. By moving the granary oser to the main house, for example, he let an adult sitting on the porch f the house see what the kids are doing at the granary without having to ear everything. He also wanted to establish a sense of connection between e two clusters of buildings while decentralizing the functions of a coun- y house and working ranch. "Getting the sight lines correct between the vo compounds was critical," states the architect.

While there are bedrooms and bunk rooms in a number of uildings throughout the project, the granary/farmhouse cluster has a ronger residential character than its counterpart, which serves mostly as e heart of the ranch's cattle and horse operations. At the latter com- ound, the architects built a new hay barn, fixed up a corral, converted a nall wood building into a guesthouse, fixed up a shack as an office for e ranch, and updated the privy with a composting toilet and a ceiling

Inside the farmhouse, Fernau & Hartman created a contemporary interior with 1,260 square feet of space, including a simple living/dining area (above) and three bedrooms upstairs (right).



light fixture made from the old three-hole toilet seat.

The Avises have long been interested in environmental issues, but working on the ranch has deepened their understanding and commitment to the land. After buying the property, they (and Fernau) enrolled at the National Outdoor Leadership School, which provides wilderness education. They also set up conservation easements for almost all of the ranch, which will maintain its rural character forever and prohibit subdividing it.

By demonstrating their concern for the land and living close to the road, the Avises have found themselves increasingly connected to the local community. Neighbors drop by if they see a car in the driveway or someone working in the hay barn. The Avises host dances in the granary and let people ride their horses on the ranch. In a place where local residents often regard outsiders with suspicion, the Avises have learned that attitudes expressed through architecture and planning can draw them into a close-knit community. ■

Sources

Bifold barn doors: *Richards-Wilcox*

Paints and stains: *Custom prepared by Cabot*

Kitchen fixtures: *Palson*

Lighting fixtures in granary: *Holophane; Stonco; Strand*

Lighting fixtures in farmhouse: *Vons Company; Lightolier*

Fireplace: *Rais*

Solar-powered composting toilet: *Sun-Mar*

For more information on this project, go to Projects at **www.archrecord.com**.

The granary (opposite, top) and farmhouse were moved closer together to create a tight cluster (opposite, bottom). Inside the granary, the architects created a basketball court (this page and opposite, middle) with a stair that lifts up to clear the way for players.

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Colleges and Universities

Collaborative Labs Spark Discovery

ADVANCED CENTERS SUPPORT RESEARCHERS WITH FACILITIES THAT FOSTER CONNECTIONS AMONG SCIENTIFIC SPECIALTIES.

1.

Toronto

A slender site on a densely built urban campus encourages architectsAlliance and Behnisch Architekten to invest a research tower with transparency.

2.

Tempe, Arizona

To establish a sense of community at Arizona State University, Richärd + Bauer place interdisciplinary research labs along a central circulation court.

3.

Cambridge, Massachusetts

Charles Correa Associates and Goody Clancy design MIT's center for neuroscience research to encourage serendipitous collaboration.

By William Weathersby, Jr.

Forget solitary experimentation behind the closed doors of ivory towers. In new laboratory research facilities rising on many college and university campuses, architects are breaking down the walls that separate scientific disciplines. Challenging traditional models—such as small, cloistered labs run as fiefdoms by senior professors—scores of new buildings offer open, flexible laboratory rooms that are shared, and also easily adapted for specialized equipment. Interdisciplinary research is a soaring trend, and campus lab buildings are taking the form of "science neighborhoods" that foster collaboration.

The incentive for university-based scientists to work as teams is "more than intellectual," writer Lila Guterman recently noted in the *Chronicle of Higher Education.* "Government agencies that pay for academic research have increasingly provided awards for interdisciplinary science." Over the six-year period from 2004 to 2010, for example, the National Institutes of Health plans to spend $2.1 billion on its "Roadmap" for medical research, whose thrust is interdisciplinary.

Nanotechnology—building man-made machinery from microscopic particles—is just one specialty that is changing the composition of academic science facilities. The National Nanotechnology Initiative, established by the federal government in 2003, annually invests $1 billion in nanotechnology research and development. Universities now upgrading their labs stand to gain a larger share of such future funding.

The projects in this month's Building Types Study, plus additional facilities featured on our Web site, illustrate the bywords of new lab design: collaboration, flexibility, and transparency. At the University of Toronto, a new tower supports scientists performing cellular and biomolecular research. Adjacent to a high-tech research district and one of the largest hospital precincts in North America, the curtain-walled complex is a new fulcrum between discovery and its application in the marketplace.

At Arizona State University's Tempe campus, the Interdisciplinary Science and Technology Building encompasses highly specialized labs, from nanotechnology clean rooms to scanning-electron-microscopy suites; its domestically scaled, de Stijl–like architecture is a warm counterpoint to the technically sophisticated experiments under way inside.

MIT's new center for studying the human brain features a central piazza and many lounges where researchers can converse. "From the start, we asked for places where we could bump into each other," says Susumu Tonegawa, MIT professor of biology and Nobel laureate for his work in immunology. "Science today is so complicated. No individual can know it all. Interdisciplinary dialogue is more important than ever." ■

r more information on these projects, go to Building Types Study at
ww.archrecord.com.

University of Toronto Center for Research

Toronto

1

ARCHITECTSALLIANCE AND BEHNISCH ARCHITEKTEN COLLABORATE ON A SLEEK URBAN TOWER SUPPORTING CELLULAR AND BIOMOLECULAR SCIENCE.

By William Weathersby, Jr.

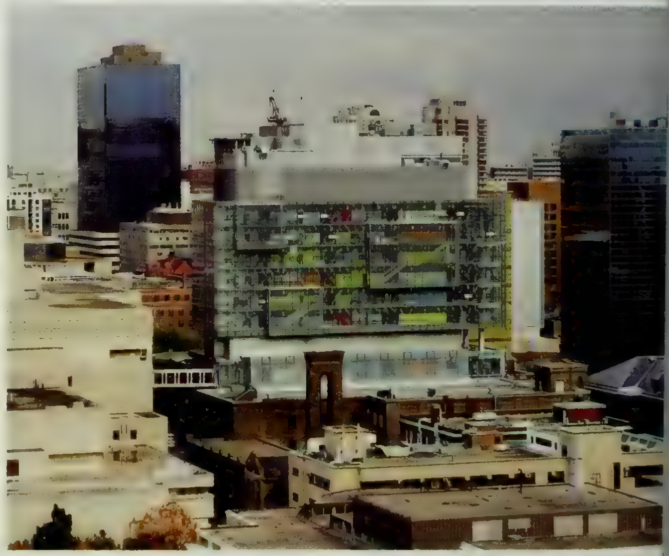
Architect: *architectsAlliance—Adrian DiCastri, Peter Clewes, partners and project codirectors; Walter Bettio, Deni Papetti, associates in charge*
Behnisch Architekten—Stefan Behnisch, principal and project codirector; David Cook, partner in charge; Volker Biermann, associate in charge
Client: *University of Toronto*
Engineers: *Yolles Partnership (structural); HH Angus & Associates (mechanical/electrical)*
Consultants: *Diana Gerrard Landscape Architecture; Flad & Associates (lab)*

Size: *248,378 square feet*
Cost: *$86 million*
Completion date: *March 2006*

Sources
Exterior cladding: *Kawneer Architectural Aluminum Products; Alcoa; Lafarge Cement*
Glazing: *Cardinal Glass Industries; Prelco; IBG Skylights*
Wall tile: *Orsini Mosaics*
Raised flooring: *Aspmazcess*
Resilient flooring: *Forbo*
Paints and stains: *Benjamin Moore; Tnemec Protective Coatings; Sherwin Williams*
Tables: *Unifor; Segis*
Chairs: *Technion; Keilhauer*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

The architectural landscape of Toronto is ablaze with adventurous new work, with academia leading the charge. At the University of Toronto, down the block from a new pharmacy studies building by Norman Foster, a science center* rises with colorful, transparent grace. The Terrence Donnelly Center for Cellular and Biomolecular Research (TDCCBR) is Canada's foremost institution for the study of the human genome. Its home, designed by Toronto-based architectsAlliance, partnered with Behnisch Architekten of Stuttgart, Germany, is a sleek, 12-story tower that addresses the context of its historical neighbors while giving a modern presence to a progressive scientific hub.



Program

The building houses 400 specialists who perform research on genetics and disease. Organized as a collaborative, interdisciplinary facility, it had to be functional, flexible, and technologically advanced.

Site restrictions were daunting. Located at the southeast corner of the university's St. George campus, the TDCCBR is wedged within a densely built district. Formerly a parking lot and service corridor, the narrow site was flanked by two historic buildings on College Street, and a mid-20th-century medical sciences building to the north. "Visually integrating the tower with the three surrounding buildings without overpowering the slender site was a key objective," says architectsAlliance partner Adrian DiCastri. "The building also was intended as a symbolic and physical bridge between the academic community to the north, the medical community to the south, and the public living and working nearby."

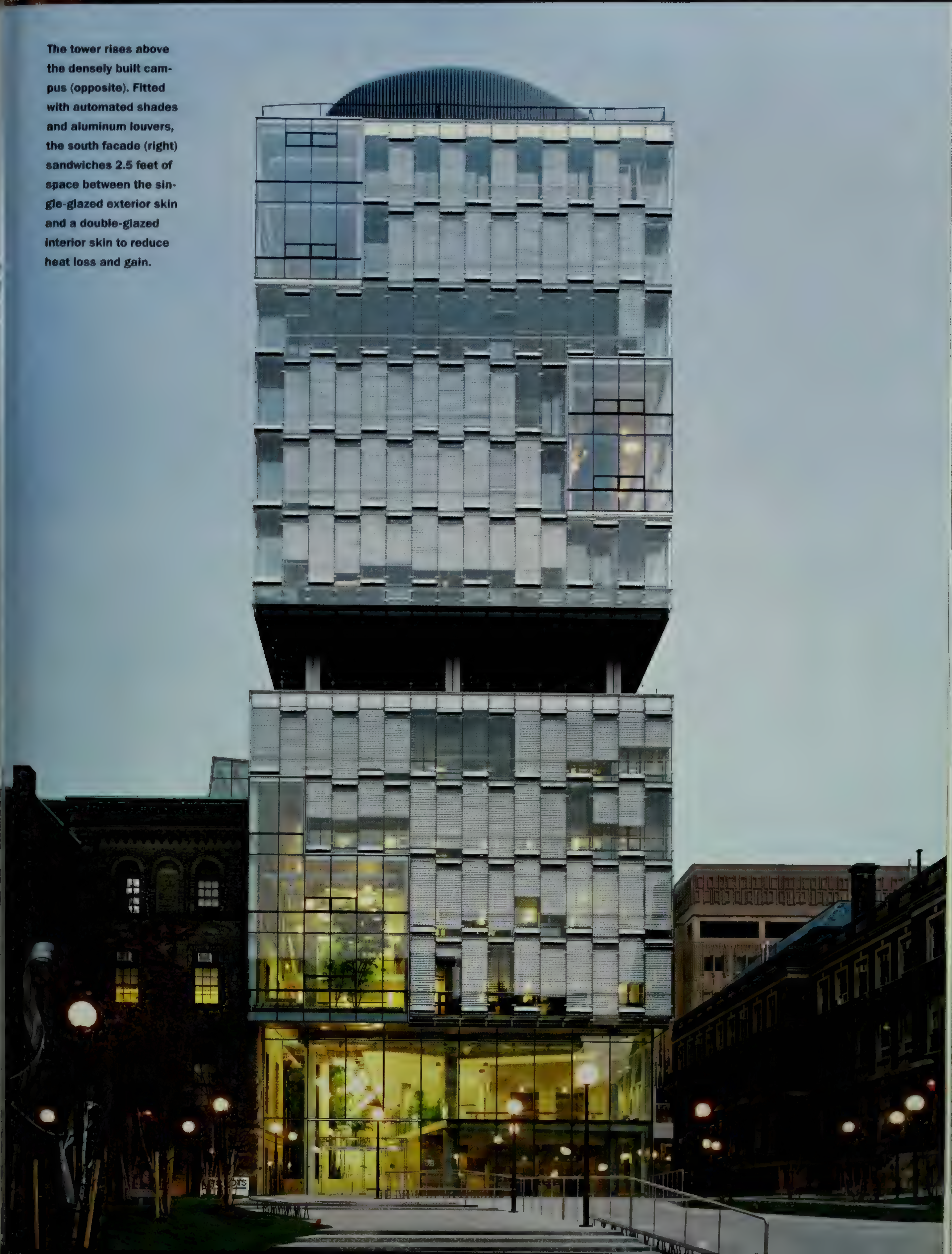
Solution

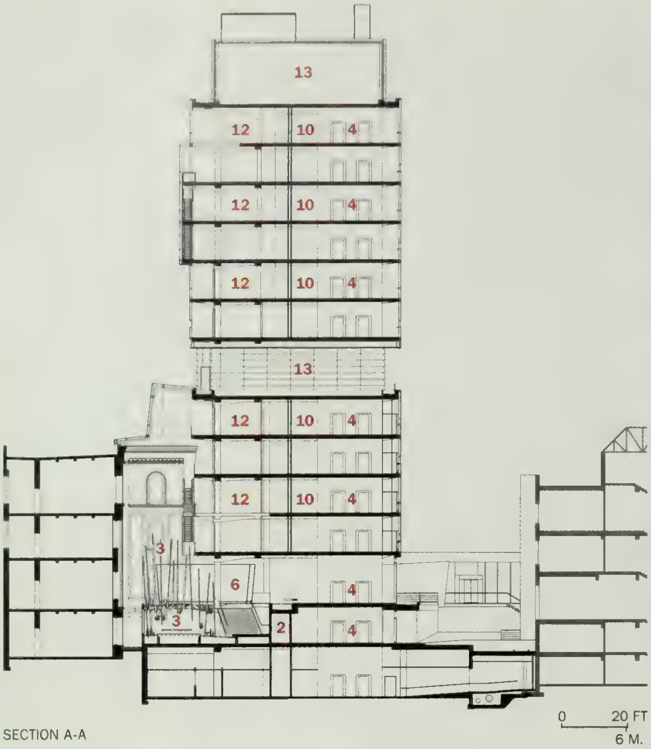
To relate to the scale of the adjacent, lower-rise buildings, the tower is broken into two vertically stacked volumes. These are divided by an intermediate sixth level that houses mechanical systems supporting the lower floors. Cinching the facade like a belt, the mechanical floor allows the loftlike laboratory spaces to remain free of mechanical rooms. The architects organized laboratories along the eastern elevation on floors two through five, and again on seven through 12. Mechanical systems supplying upper floors are housed within an amoeba-shaped, stainless steel enclosure on the roof.

A granite-paved forecourt enhanced by landscaping serves as the main entrance to the TDCCBR. Inside, a five-level Winter Garden borders the adjacent Rosebrugh Building, whose restored, buff-colored brick facade (circa 1919) now serves as the skylit atrium's wester wall. Liriope grass and 45-foot-tall bamboo trees create an engaging microclimate where students, staff, and visitors gather.

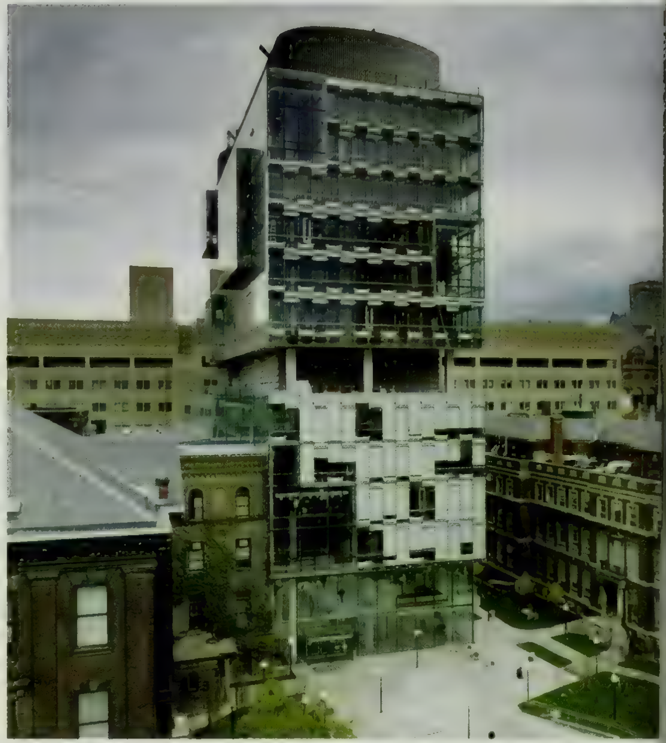
Bordering the Winter Garden,

The tower rises above the densely built campus (opposite). Fitted with automated shades and aluminum louvers, the south facade (right) sandwiches 2.5 feet of space between the single-glazed exterior skin and a double-glazed interior skin to reduce heat loss and gain.

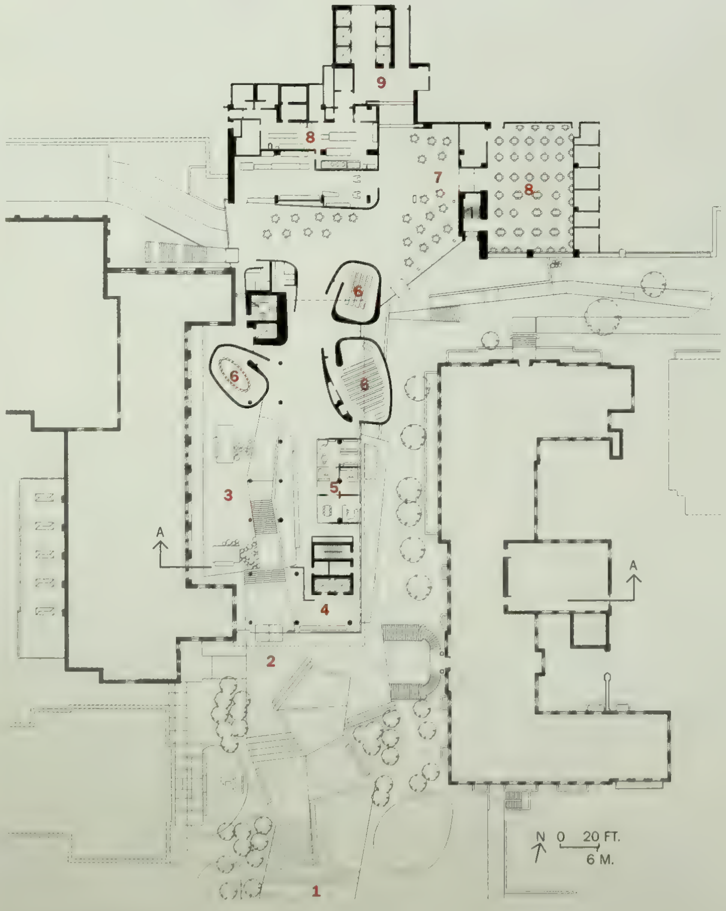




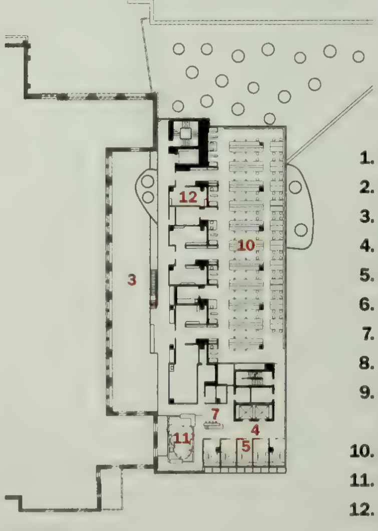
SECTION A-A



A sixth-floor mechanical level "cinches" the facade (above), lessening its visual mass and relating to the scale of adjacent historic buildings (elevation, plans).

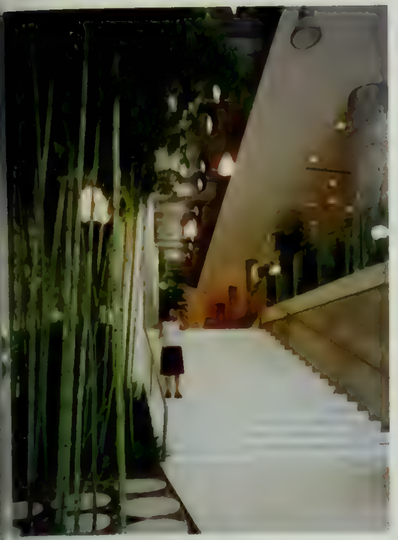


FIRST FLOOR/CONCOURSE

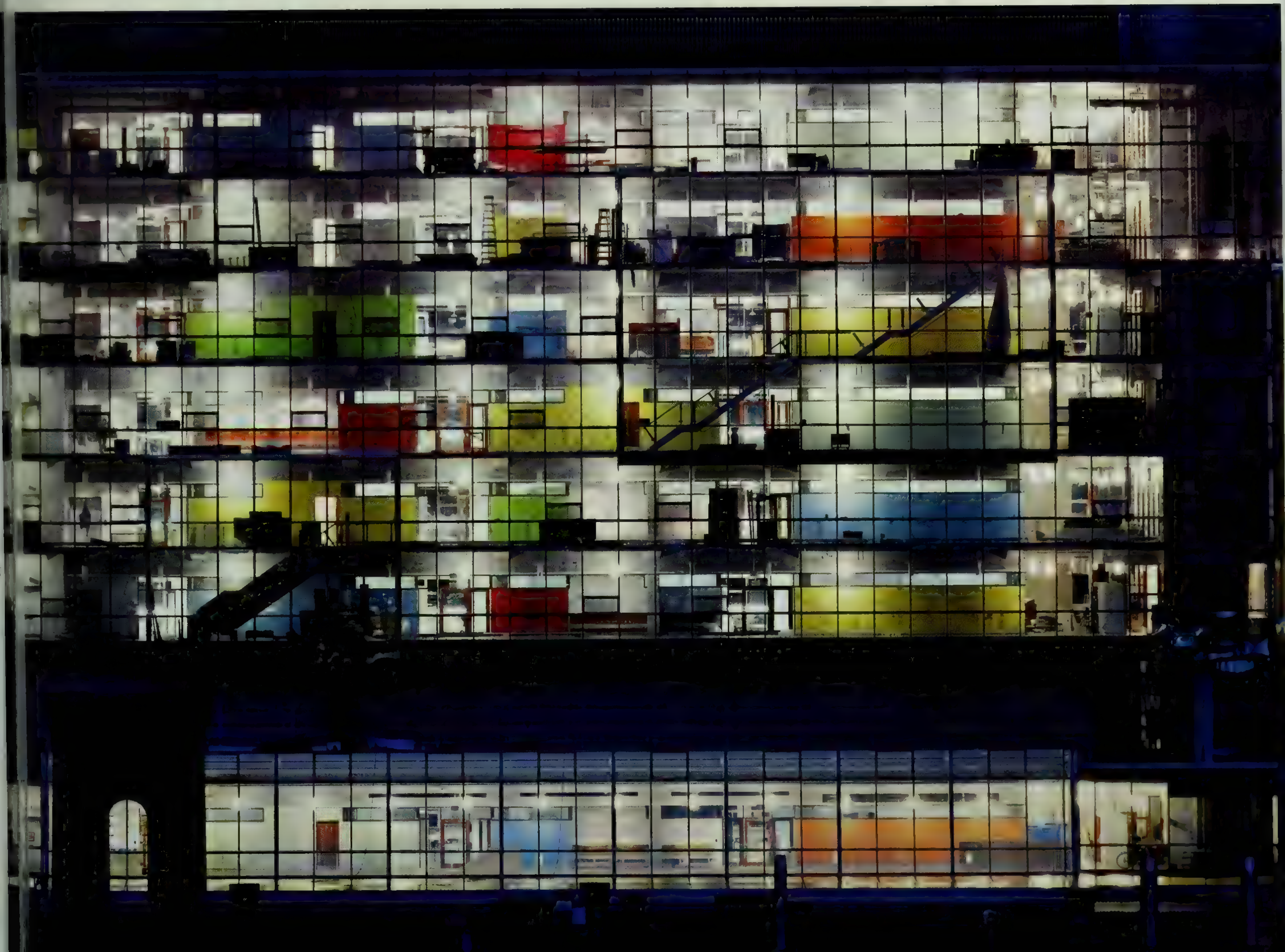


SECOND FLOOR

1. *Forecourt*
2. *Main Entrance*
3. *Winter Garden*
4. *Elevator lobby*
5. *Office*
6. *Seminar room*
7. *Lounge*
8. *Cafeteria*
9. *Connection to adjacent building*
10. *Laboratory*
11. *Garden*
12. *Support*
13. *Mechanical*



Bordered by bamboo in the atrium (above left), a terrazzo staircase leads to a concourse featuring a cafeteria and seminar rooms (above right). Color-coded labs are visible along the western elevation (below).



a concourse level acts as a north–south campus thoroughfare. The concourse houses a cafeteria, lounges, and administrative offices, plus three 90-seat seminar rooms wrapped by glass-mosaic-tile enclosures—in either black, white, or red.

The design team created spacious laboratory interiors by omitting suspended ceilings, exposing services and superstructure, and specifying simple, durable materials. Shallow floor plates and glass walls allow a high degree of transparency, while work zones are differentiated by color, lighting, and millwork.

On each lab floor, six private offices reserved for principal researchers line the southern perimeter. Research associates—38 per floor accommodated at 11 flexible workstation benches—can quickly access lounges, cold rooms, and areas housing specialized equipment. Easy to reconfigure, the research stations are organized along the eastern perimeter of the building. Wet and dry labs hug the central service spine. A spacious circulation corridor on the west perimeter provides access to glass-enclosed lab areas. Connected by staircases, the corridors on lower levels overlook the Winter Garden. Three additional double- and triple-height gardens accent upper floors.

Commentary

Respecting the scale of its neighbors, the vibrant tower offers researchers efficient, clean-lined labs enhanced by sweeping views of the city. Architects treated the cladding of each elevation differently and creatively, heeding programmatic and climatic requirements. The south entrance facade, for example, is double-glazed, providing acoustic and solar control while maintaining a richly textured transparency. The east facade uses color-laminated glass, while the west facade's ceramic-fritted glass has a dot-matrix pattern—stylized strands of DNA— that manages solar gain and visually reduces the building's mass. Meanwhile, active and passive sustainable design components support energy efficiency and user comfort. Infused with transparency and light, the high-performance center supports technical rigor while artfully revealing its inner workings to the outside world; as DiCastri claims, it "renders science visible." ■

An open circulation
orridor on the western
erimeter provides
ntry to the labs and
verlooks the garden
trium (right and oppo-
ite, top right). The
kylight connects to the
estored 1919 facade of
he Rosebrugh Building.
abs (opposite, center
ight) were designed for
lexibility; wet labs can
e altered for biology,
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atics. Dry labs
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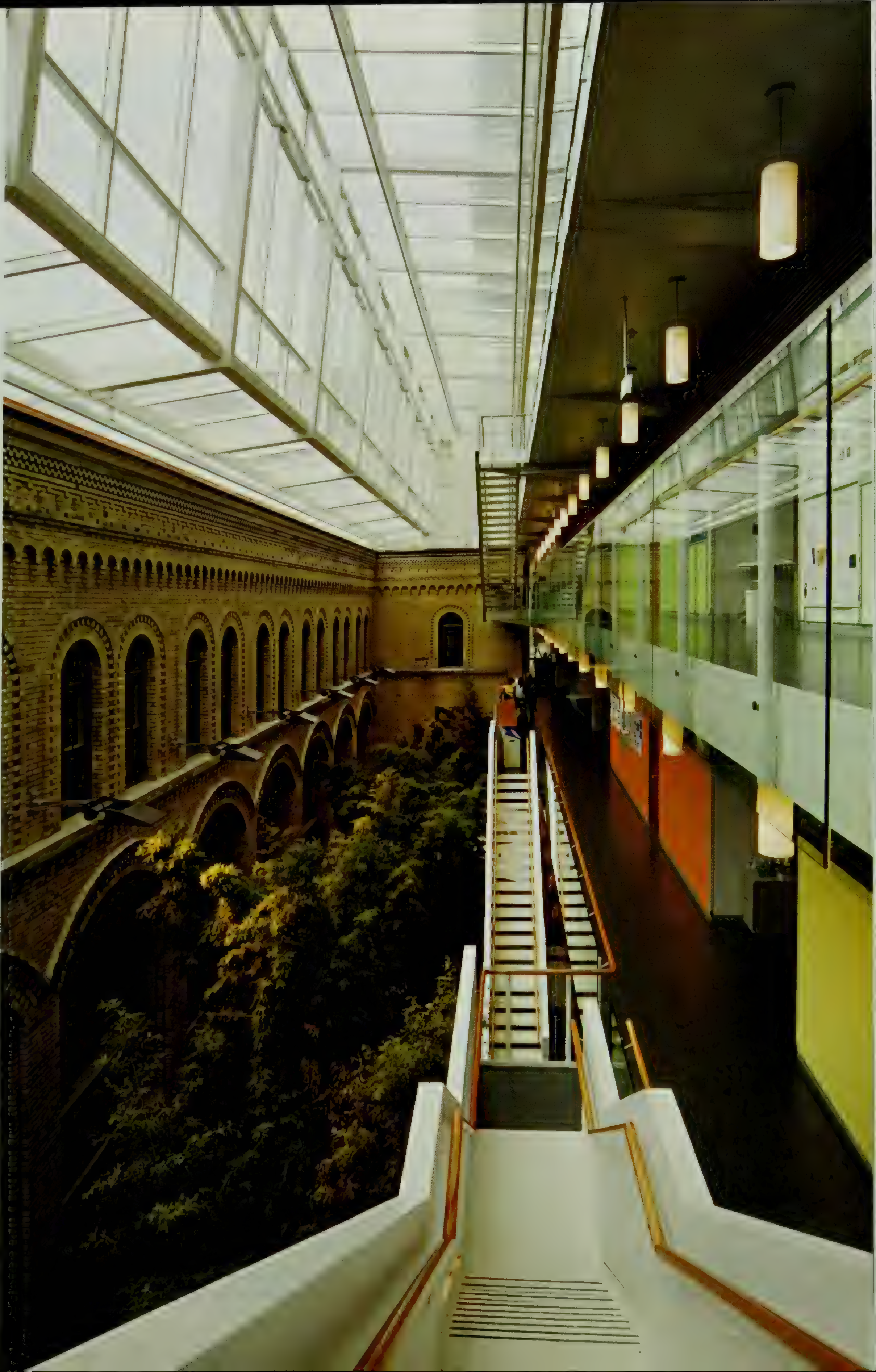
ardens on some floors
pposite, top left) join
e Winter Garden
pposite, bottom) as
ontemplative spaces
way from labs.



Arizona State Science and Technology Building

Tempe, Arizona

2

RICHÄRD + BAUER BRINGS DESIGN SENSITIVITY AND A MODERNIST EXPRESSION OF FUNCTION AND STRUCTURE TO A HEAVY-DUTY BUILDING TYPE.

By Suzanne Stephens

Architect: *Richärd + Bauer Architecture—James Richärd, AIA, principal in charge of design; Steve Kennedy, AIA, principal in charge of architectural technology; Andrew Timberg, project architect and construction administration; Kelly K. Bauer, principal in charge of interior design; Stacey Krantz, project interior designer*
Client: *Arizona State University*
Engineers: *Caruso, Turley, Scott (structural); Energy Systems Design (m/e/p); KPFF (civil)*
Consultants: *CF Schuler (landscape); CMCC (cost controller); AZ Lighting + Sales (lighting); Isec (lab)*

Size: *66,000 square feet*
Cost: *$13.8 million*
Completion date: *August 2005*

Sources
Curtain wall: *Vistawall Group*
Concrete: *Hardrock Concrete (cast-in-place); Coreslab Structures*
Masonry: *Hochstetler Masonry; Superlite Block*
Aluminum panels, windows: *Mirror Works*
Corrugated-metal panels: *Morin*
Roofing: *Progressive Roofing*
Acoustical ceiling: *Armstrong*
Plastic laminate: *Wilsonart*
Tile: *Daltile*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

Even though the 10-year-old Phoenix firm Richärd + Bauer seems to have a monopoly on branch libraries in southern Arizona [RECORD, May 2006, page 152; January 2006, page 96], it has also won a number of college and university commissions in the area [RECORD, December 2001, page 70]. In a country where other architects, who are also in their forties, still hope to turn the corner from shops, restaurants, and houses to larger-scale institutional work, it almost seems unfair. Of course, it helps that James Richärd, Kelly Bauer, and partner Steve Kennedy are working in one of the fastest-growing areas in the United States. More to the point, perhaps, is that their designs are distinctive: They reflect a Modernist heritage with clean, taut planes; an interpenetration of indoor and outdoor spaces; and a practical, no-nonsense attitude toward the plan. In addition, Richärd + Bauer's interest in regionally appropriate materials and reverence for proportion and line endow its architecture with a timeless presence.

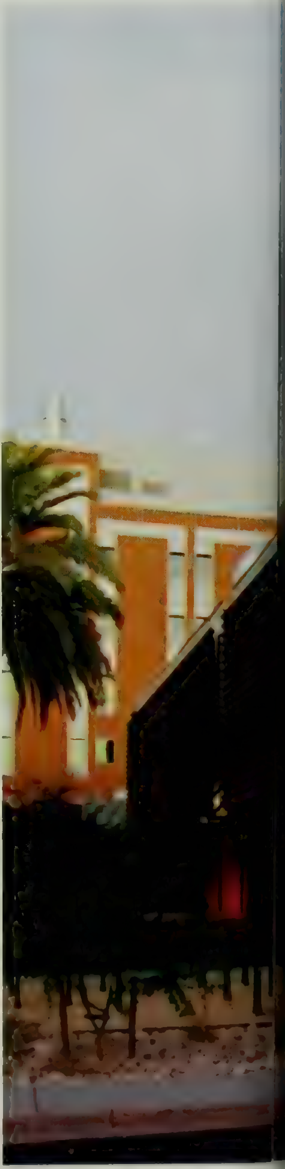
Program

For the Interdisciplinary Science and Technology Building (the second of a series) on its Tempe campus, Arizona State University needed a basic 66,000-square-foot structure where physical and environmental research associated with mechanical, aerospace, civil, geological, and chemical engineering could be carried out. The interdisciplinary program called for labs to be flexible in a major way: The building had to include spaces for testing earthquake-resistant structures, conducting turbine and internal-combustion engineering studies, and analyzing various kinds of soils. In addition to providing a room for a large supersonic wind tunnel, the architects were asked to create labs that could, for example, accommodate microscopy suites for scanning electrons today, and who knows what tomorrow.

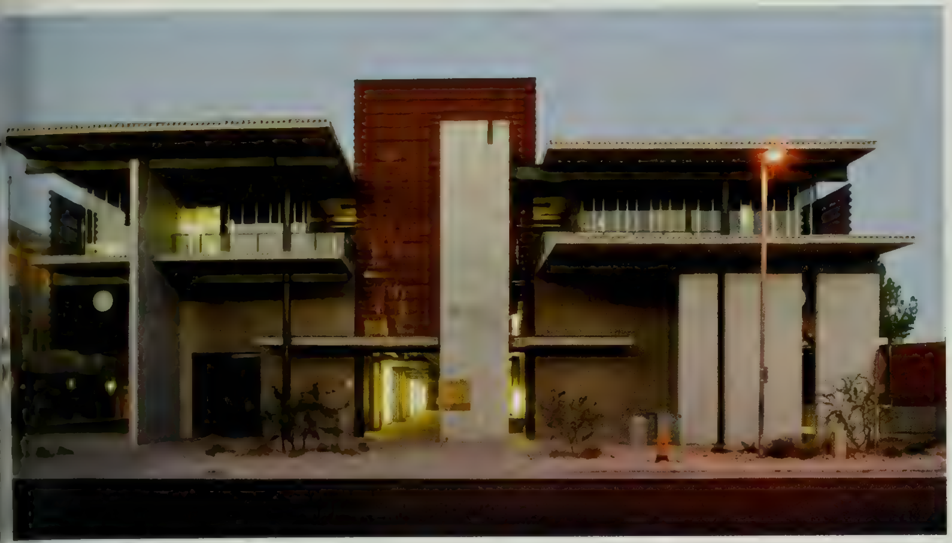
Solution

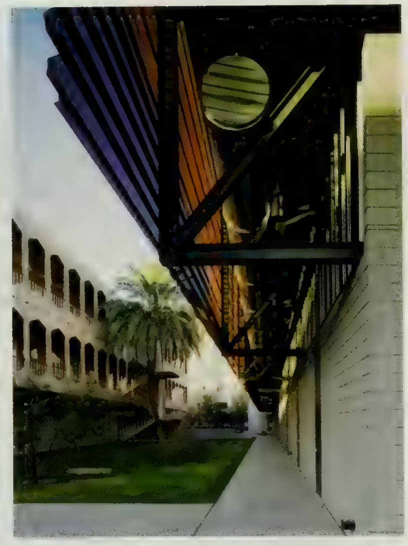
Given a narrow, 38,400-square-foot site on a campus interlaced with pedestrian paths, Richärd + Bauer filled the lot with an inward-turning building. Two long bars of laboratories, each 24 feet wide, flank an interior courtyard that acts as the main circulation spine for the building. (A separate facility on the other side of a service drive accommodates storage for materials to be tested).

Initially the university and the architects were thinking of using tilt-slab concrete construction. But the site proved to be too tight for this technique. So the architects decided on a steel-truss-and-column frame, with precast-concrete floor planks, poured-in-place concrete planes, and concrete-block enclosing walls. The steel super-

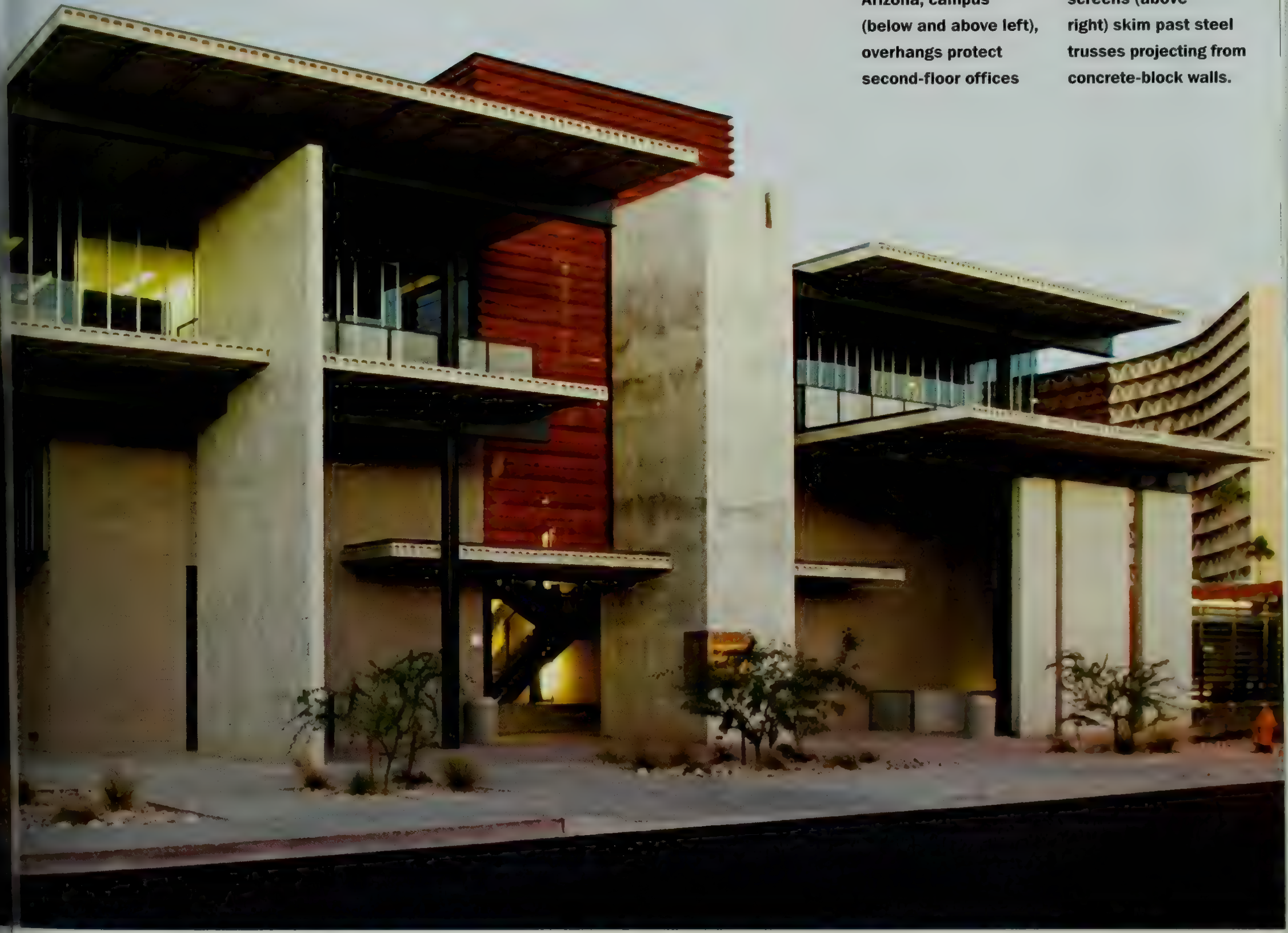


PHOTOGRAPHY: © BILL TIMMERMAN



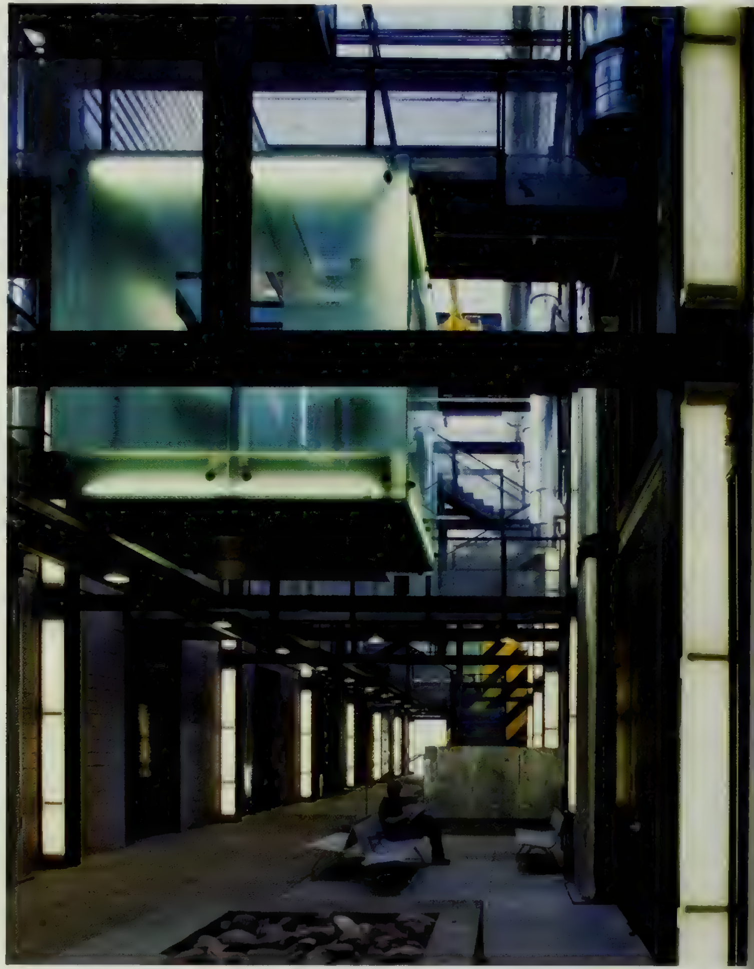


On the main (east) elevation of the Tempe, Arizona, campus (below and above left), overhangs protect second-floor offices from the sun. Weathered-steel sunscreens (above right) skim past steel trusses projecting from concrete-block walls.



trusses, the height of one floor, dampen vibrations for the heavy-duty activities in the labs and, between the two floors, carry a mezzanine on their lower chords to accommodate smaller labs and walkways (section, opposite).

The laboratory's courtyard contains utility cores and steel catwalks and bridges, with hospital-size poured-concrete elevator shafts located at either end of the covered space. In the true Modernist spirit of calling out service functions, the architects ran all the electrical, HVAC, and lab services through this central court within insulated ducts and painted conduits: "We like a tectonic architectural vocabulary," says Richärd. Not all is exposed: Frosted-glass-enclosed meeting rooms are perched above the courtyard at the mezzanine level. Perforated-steel panels, now weathered to a brownish tinge, wrap the exterior of the building to help shade spaces within. The inward focus of the plan and the screen walls also keep the courtyard comfortable in the intense Arizona sun—with additional air provided by large fans and evaporative cooling systems.



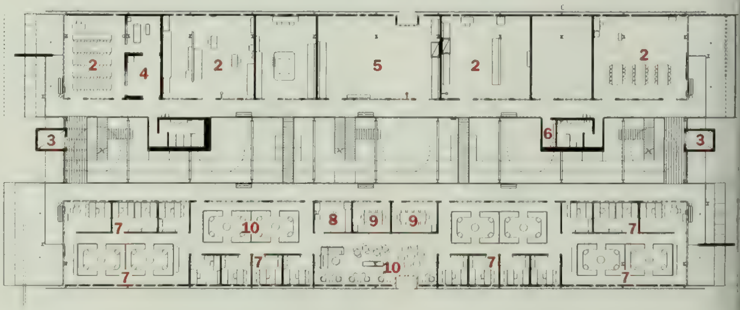
Luminous green-frosted-glass-enclosed meeting rooms seem to float within the steel-framed skylit courtyard (right), which acts as the main circulation spine for the laboratory building. Precast-concrete planks surface the interior space at grade, as well as the mezzanine, second, and roof levels.

Commentary

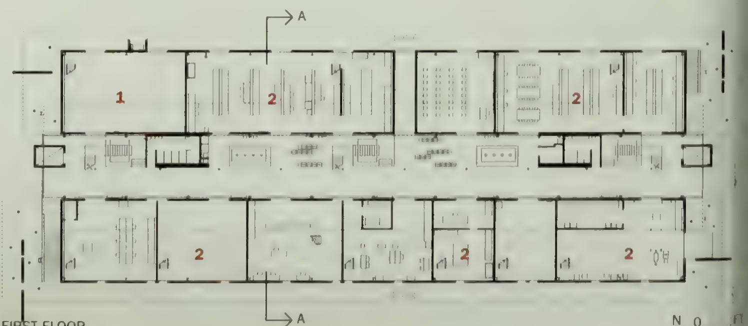
Although Arizona hovers around 100 degrees in the summer, its climate allows an intersection of indoor and outdoor spaces that early Modernist architects only dreamed of. The de Stijl–like composition of the building, combined with the nuts-and-bolts plans for the laboratories, give the entirety an unexpectedly elegant aspect, all the more impressive on the moderate $13 million budget.

While the industrial-strength labs clearly announce their purpose, Richärd + Bauer endowed the exterior elements with a domestic scale. The firm has produced a design for an ordinarily rough-and-ready building type where the ghosts of Frank Lloyd Wright and Louis Kahn hover, particularly in its planarity and articulation of forms. With technical and budgetary requirements so severely impinging on every decision, this is no mean feat. ■

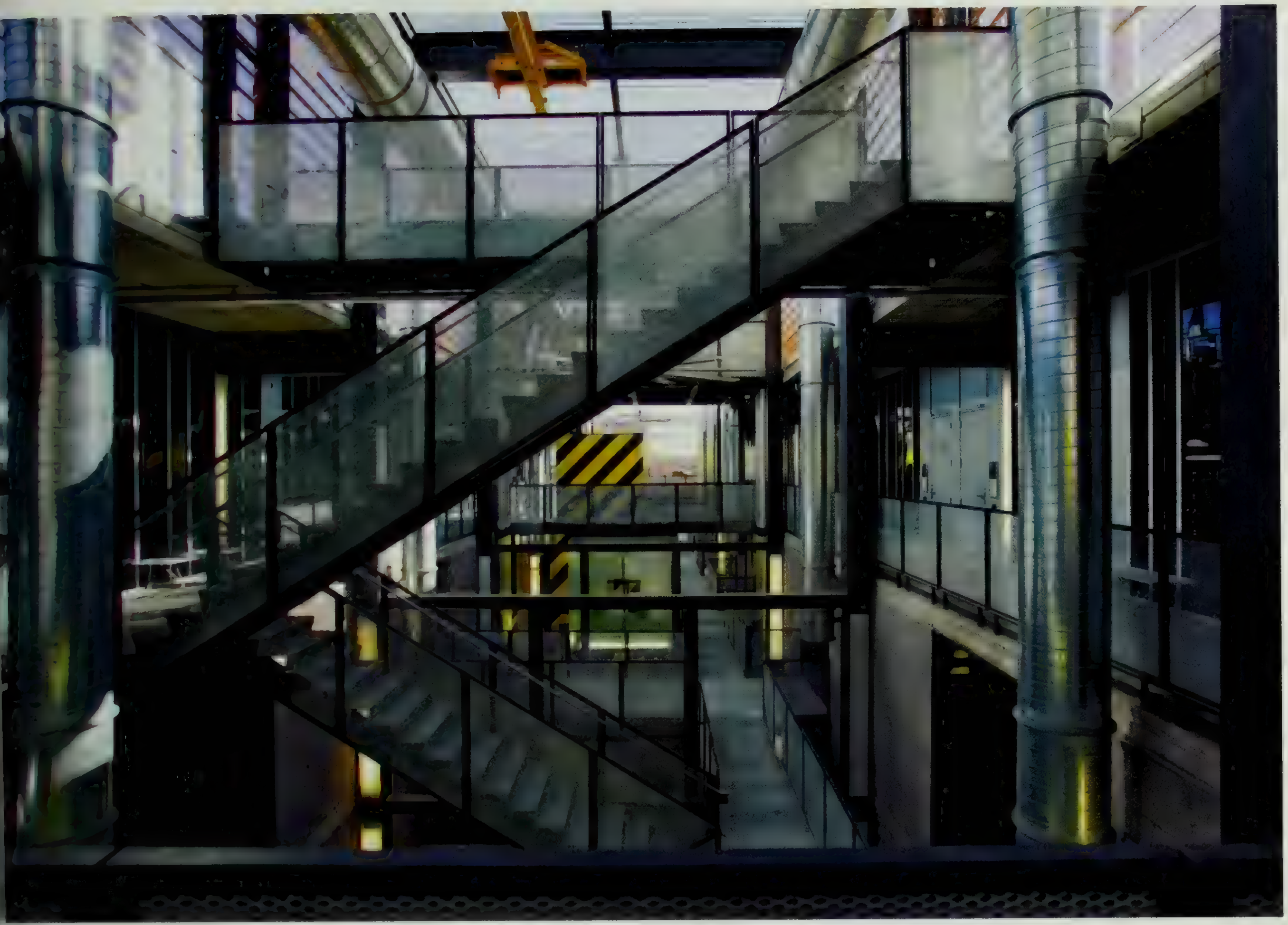
1. *Supersonic wind tunnel*
2. *Lab*
3. *Elevator*
4. *Test cell*
5. *Combustion research*
6. *Data room*
7. *Office*
8. *Copy center*
9. *Conference room*
10. *Lounge*



SECOND FLOOR

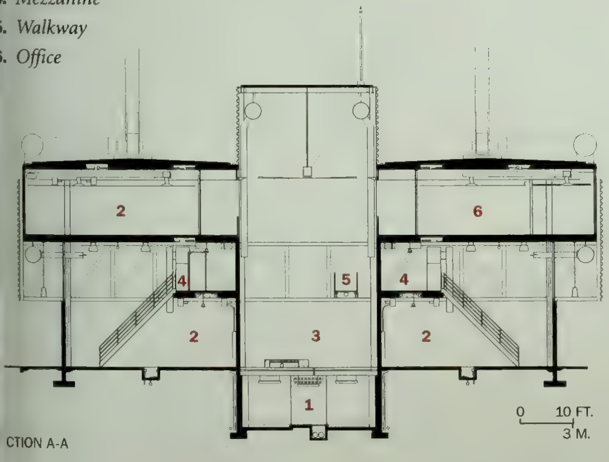


FIRST FLOOR



Galvanized-steel-mesh balustrades on the stairs in the courtyard (above) heighten translucency. A second-floor lounge (right) features internally lit structures of red, dry-erase marker boards. The labs (below right), often 22 feet high, include one for testing advanced paving materials.

1. *Service level*
2. *Lab*
3. *Central court*
4. *Mezzanine*
5. *Walkway*
6. *Office*



CTION A-A

MIT Brain and Cognitive Sciences Complex

Cambridge, Massachusetts

3

CHARLES CORREA ASSOCIATES TEAMS WITH GOODY CLANCY TO DESIGN A NEUROSCIENCE RESEARCH CENTER THAT ENCOURAGES COLLABORATION.

By Nancy Levinson

Architect: *Charles Correa Associates (lead designer)—Charles Correa, FAIA, principal in charge; Julian Beinhart, principal; Nondita Correa-Mehrotra, project architect; E. Daniel Broggi, executive architect; Sachin Aghshikar, design architect; Salil Simon, Brian Anderson*
Architect of record: *Goody Clancy—Roger Clancy, FAIA, principal; Ted George, Doug Carr, AIA, project architects; Doran Abel, AIA, Jim Norris, AIA, project managers; Bernard Dooley, AIA, laboratory design director*
Client: *Massachusetts Institute of Technology*
Engineers: *LeMessurier Consultants (structural); BR+A Consulting Engineers (mechanical/electrical/telecommunications); SEA Consultants (civil/storm water); Arup (facade engineering)*

Size: *412,000 square feet*
Cost: *$175 million (construction)*
Completion date: *September 2005*

Sources
Curtain wall, windows: *Pilkington Planar Systems; Karas & Karas; SOTA*
Acoustical ceilings: *Ecophon*
Flooring: *New England Decks and Floors; Armstrong; Altro; Flor Gres*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

The Massachusetts Institute of Technology has undergone remarkable transformations in the past decade. Not since the mid-20th century, when the school commissioned Alvar Aalto's Baker House and Eero Saarinen's MIT Chapel and Kresge Auditorium, has the 90-year-old, 168-acre campus in Cambridge, Massachusetts, seen so much formally adventurous new architecture. Notable projects of the billion-dollar campus building program include Simmons Hall, the riotously fenestrated dormitory by Steven Holl Architects [RECORD, May 2003, page 204] and the Stata Center, a computer science extravaganza by Gehry Partners [RECORD, August 2004, page 98]. The latest major new work is the Brain and Cognitive Sciences Complex (BCSC), certainly the least showy and arguably the most satisfying of them all. Designed by Charles Correa Associates, of Mumbai, in collaboration with architect of record Goody Clancy, of Boston, the seven-story, 412,000-square-foot BCSC is the world's largest center for neuroscience research; it is also an elegant example of leading-edge laboratory design.

Program

The BCSC posed all the typical demands of design for research—and then some. The program specified almost four dozen wet and dry laboratories, along with much specialized equipment (cold rooms, hot rooms, autoclaves, centrifuges, magnetic resonance imagers, electrophysiology rigs, etc.). It also called for communal areas that would support ad hoc collaboration.

The program was further complicated by a bureaucratically and philanthropically intricate agenda. Home to the Brain and Cognitive Sciences department, the complex also would house two new, endowed centers, the McGovern Institute for Brain Research and the Picower Institute for Learning and Memory—each requiring a distinct presence.

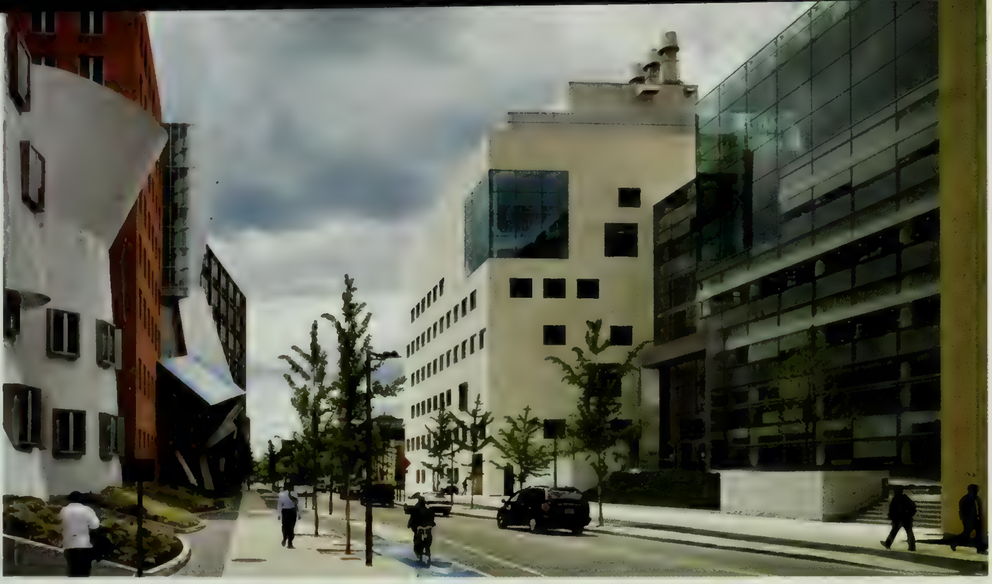
Programmatic complexities were matched by site idiosyncrasies. The BCSC is located on a triangular plot of land. To the north is the major thoroughfare of Main Street, making the new building a campus gateway. To the south is the ebullient Stata Center, a tough iconic act to follow. Complicating matters further, the site is bisected by an active freight railroad. On top of this spatial challenge, the sensitive lab machinery required structural isolation from low-frequency train vibrations.

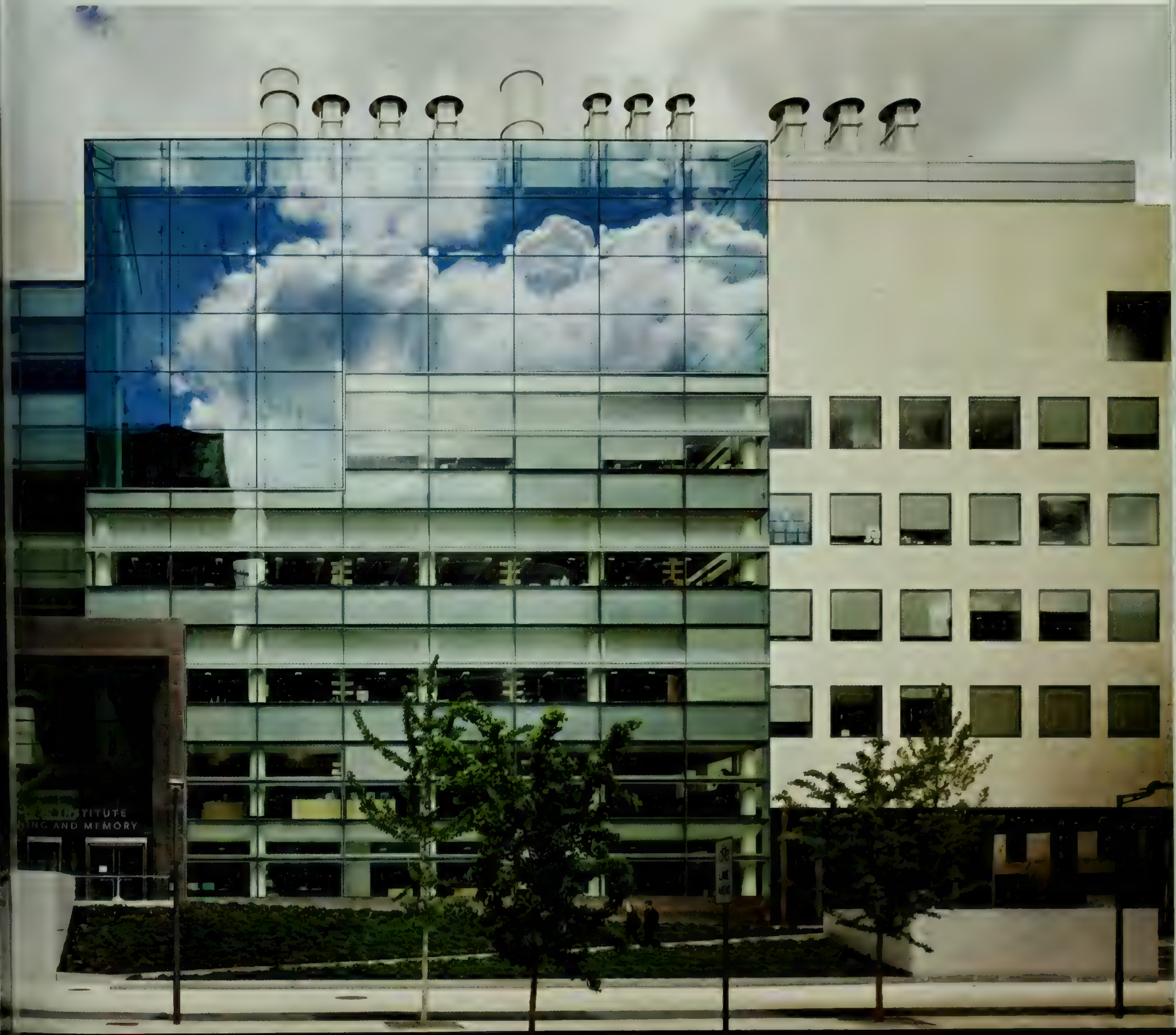
Solution

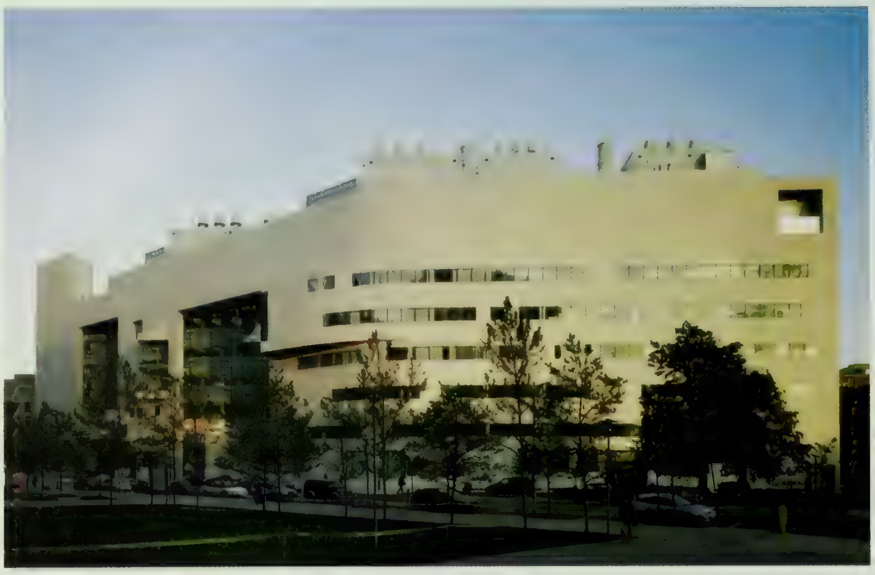
The architects confronted these challenges with formal and technical ingenuity. To accommodate the three departmental entities, they skillfully exploited the site geometry; each program occupies its own generous corner of the triangle, and McGovern and Picower have their own imposing entrances with multi-

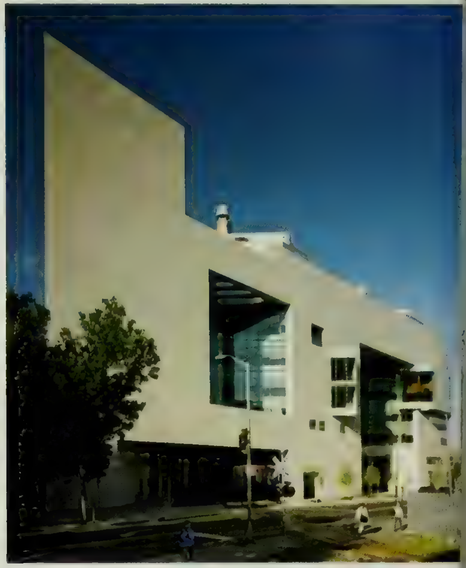
PHOTOGRAPHY: © ANTON GRASSL/ESTO, EXCEPT AS NOTED

Cladding of Portuguese limestone and green-tinted glass (right and below) make the science and research complex a quieter counterpoint to Frank Gehry's Stata Center (right, at far left). Two new institutes share the building with the Brain and Cognitive Sciences department.

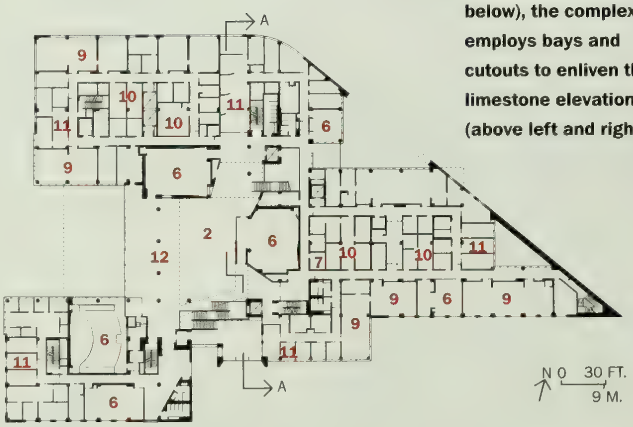




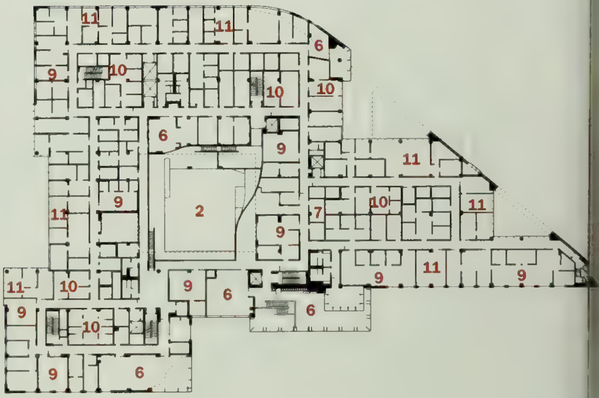




Curving around the triangular site (plans, below), the complex employs bays and cutouts to enliven the limestone elevations (above left and right).

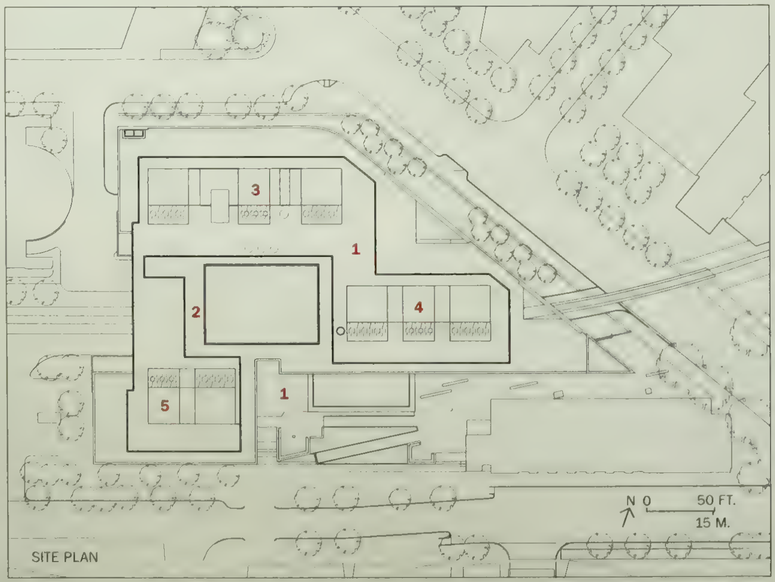


LEVEL THREE

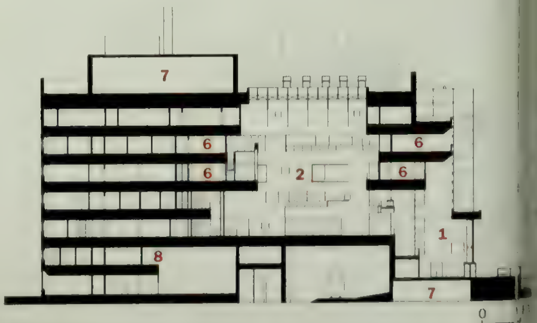


LEVEL SIX

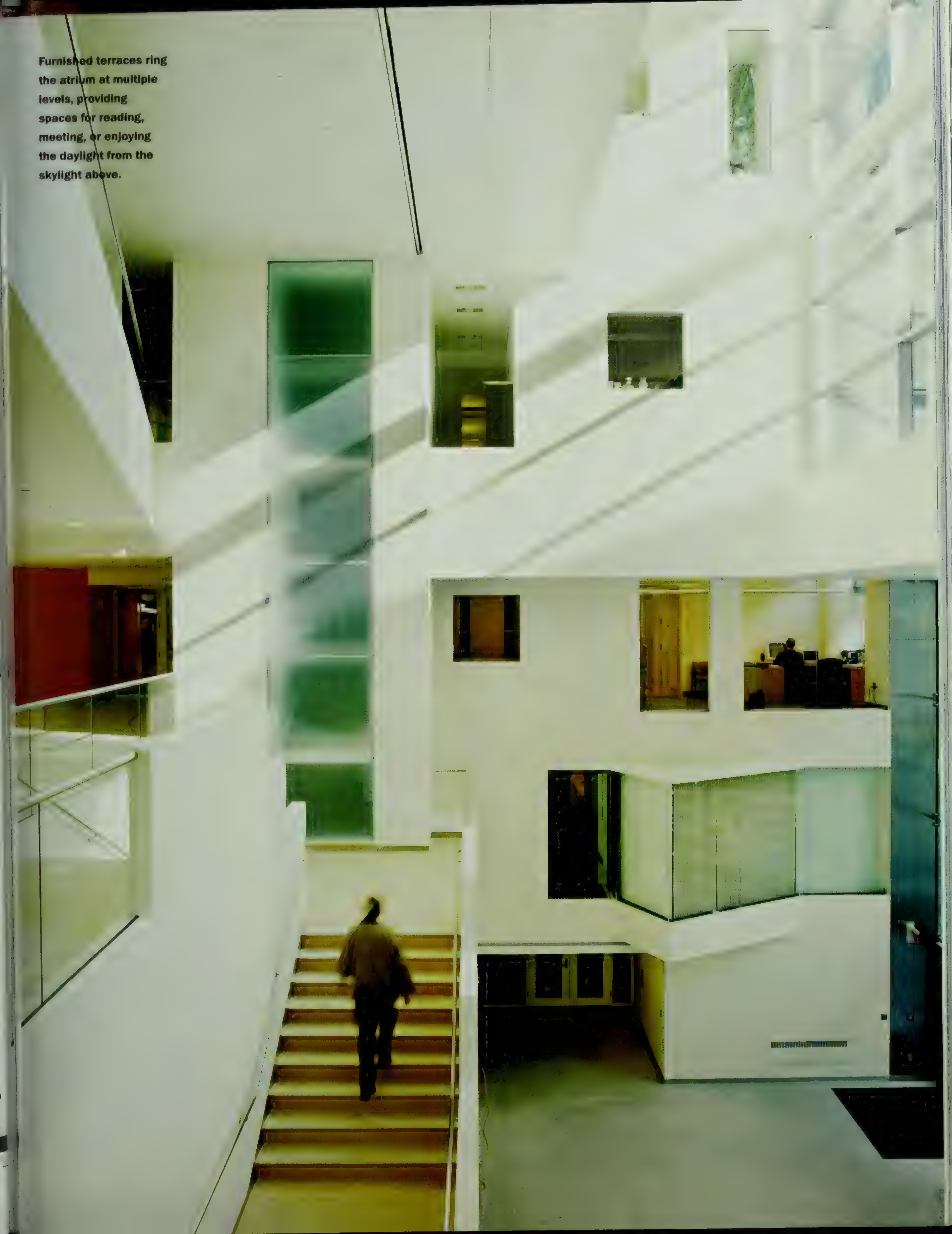
1. *Lobby*
2. *Atrium*
3. *McGovern Institute*
4. *Picower Institute*
5. *Department of Brain and Cognitive Sciences*
6. *Conference*
7. *Mechanical*
8. *Magnet bay*
9. *Laboratory*
10. *Support*
11. *Office*
12. *Café*



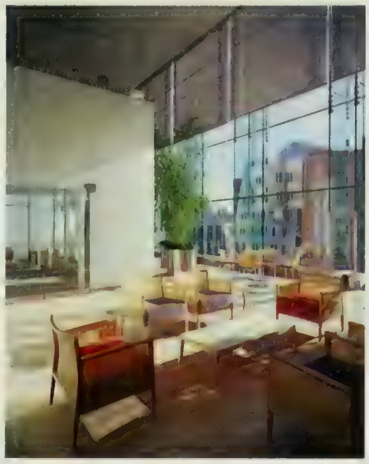
SITE PLAN

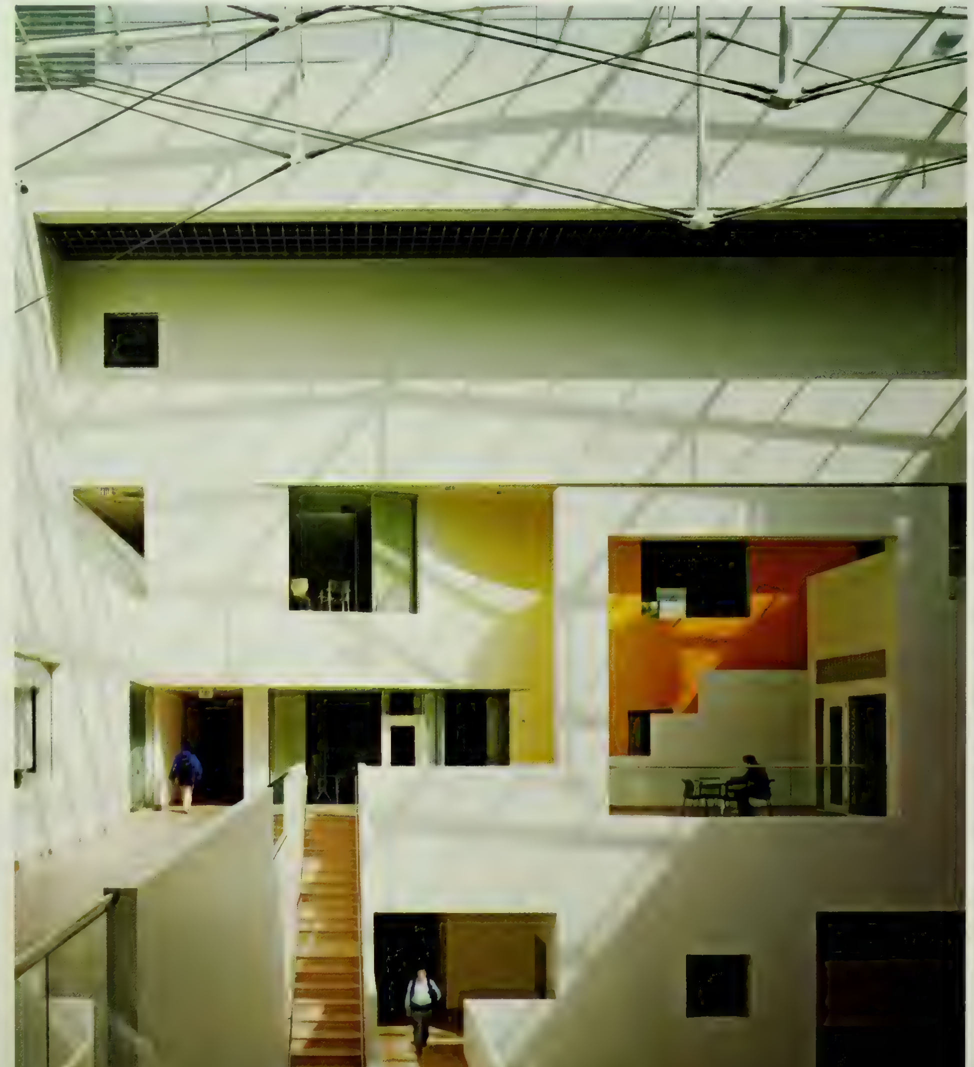


SECTION A-A



Furnished terraces ring the atrium at multiple levels, providing spaces for reading, meeting, or enjoying the daylight from the skylight above.





Palm trees and bamboo within the conservatory (far left) provide a visual and environmental break from the intensity of lab research (near left). The five-story atrium unifies the complex (below). Scientists use the space for large gatherings.

story lobbies. In the center of the building, a five-story, glass-roofed atrium brings daylight deep into the building and unifies the complex. Scientists use the atrium for large gatherings. For social interactions, they can choose from a variety of spaces: a bamboo-filled conservatory, a double-height library, and many seminar rooms and tearooms

To make way for the trains, the building bridges over the railroad (a Vierendeel truss carries the load). To protect the labs from vibrations, supporting piles were driven down 110 feet to bedrock.

Commentary

The neuroscientists who work in the BCSC enjoy well-equipped and -serviced laboratories. (The building benefits from green technologies, including heat-recovery systems, graywater recycling, and high-performance walls, and is designed to achieve LEED Silver certification.) Beyond its technical proficiencies, the facility is an assured and thoughtful work of urban design. The architects have treated the exterior with judicious restraint, limiting cladding materials to Portuguese limestone and green-tinted glass, and enlivening the facade with subtle bays and large cutouts—what Correa calls "urban windows"—scaled to Main Street. With this Minimalist approach, they avoided the obvious solution of expressing the building's tripartite program on the facade. The team resisted th urge to compete with Gehry's curvy and colorful Stata Center. As Corre says, "We didn't want to raise the decibel level at this corner of the campus." The architects have had the confidence to turn down the volume, making Brain and Cognitiv Sciences a sleek counterpoint to i neighbors and a distinguished addition to MIT's 21st century. ■

lliam Duff, Architect, WDArch.com

James Walbridge, Architect, tektonarchitecture.com

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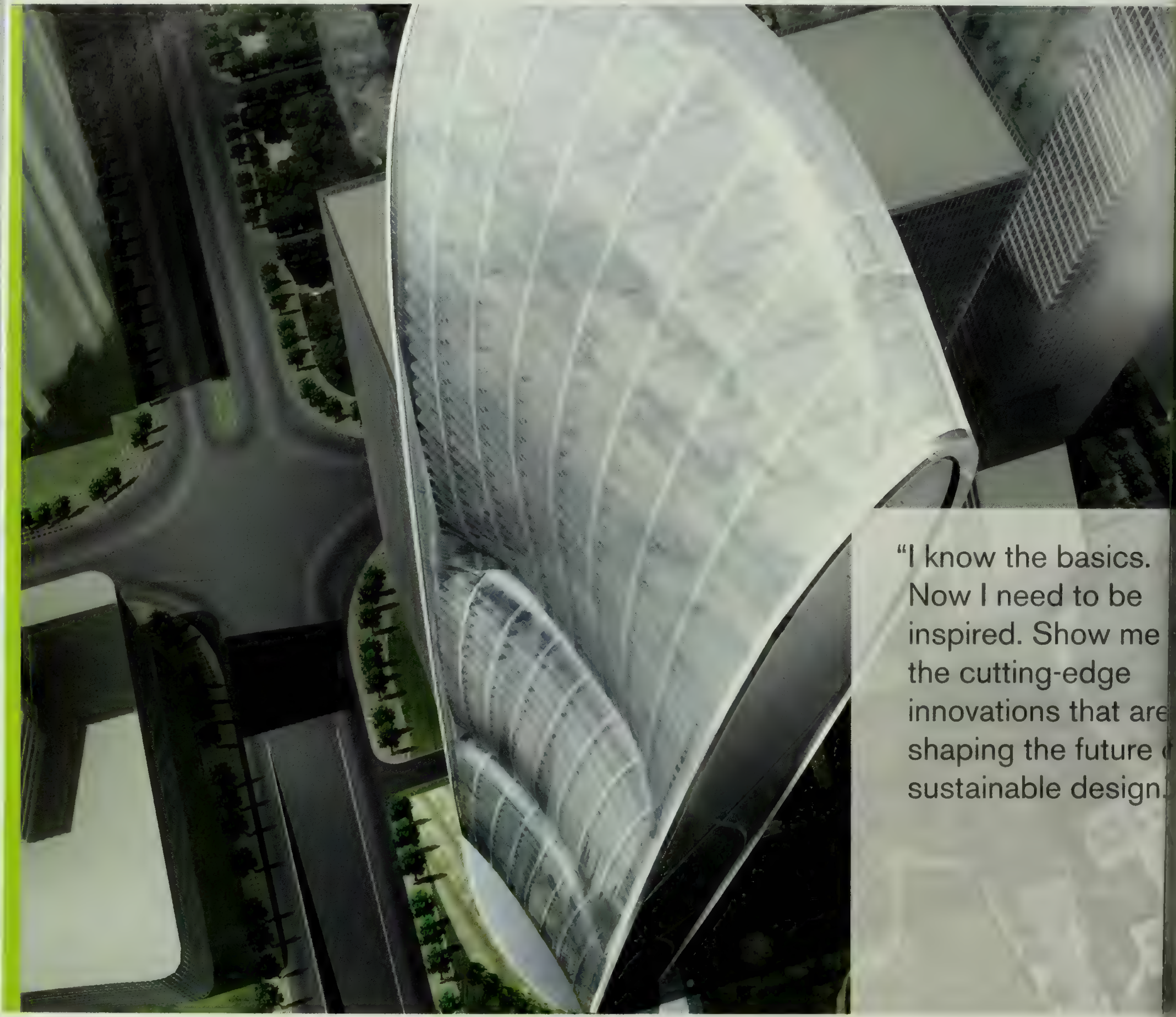

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Skidmore Owings and Merrill's Pearl River Tower (above and right) will be built in Guangzhou, China. It's designed to produce more energy than it consumes, and is just one of the case-study buildings that will be presented at the conference.

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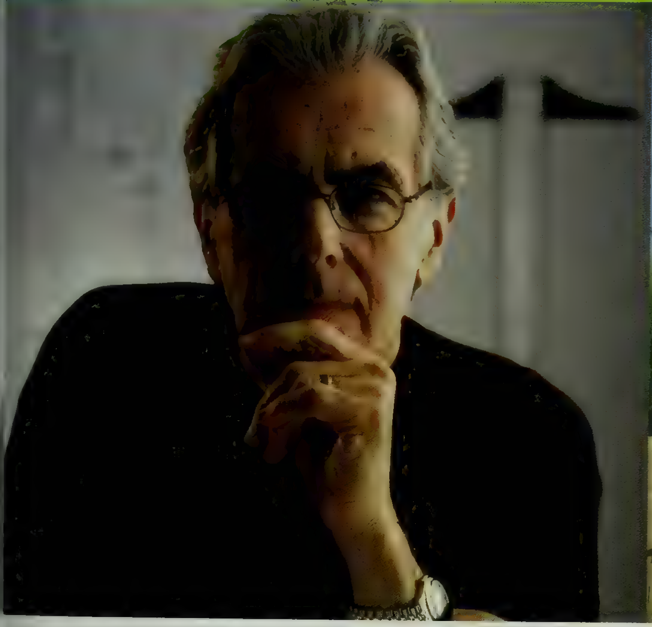

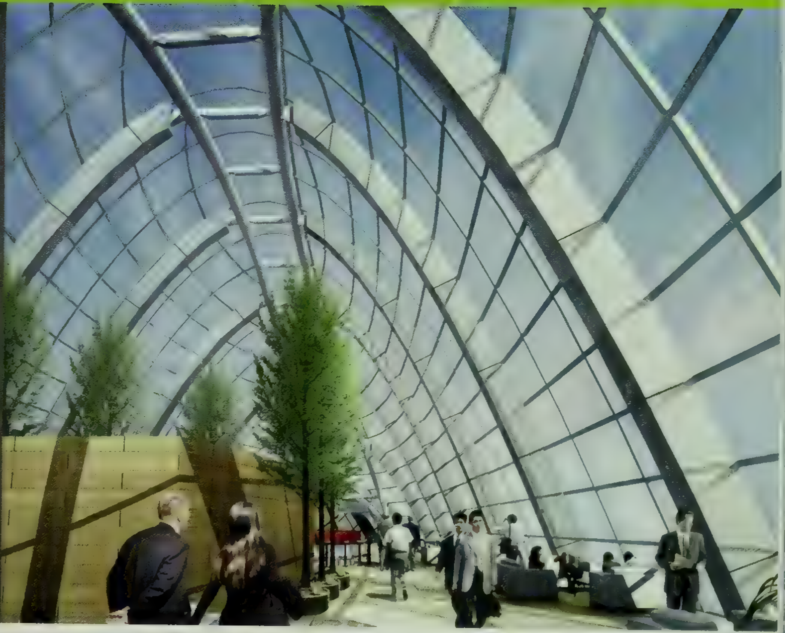

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An Abandoned Airport Brownfield Takes Off

ARSONS CLEANS UP A MASSIVE BROWNFIELD SITE AT DENVER'S SHUTTERED STAPLETON INTERNATIONAL IRPORT, ALLOWING FOR THE DEVELOPMENT OF NEW NEIGHBORHOODS FOR THE INNER CITY

y Russell Fortmeyer

Chances are, you've flown into Denver's gleaming international airport, rented a car, and driven into downtown and past the largest rownfield development in the country, if not rguably the largest urban infill project. If you appened to glance out the window, you might e rolling parkland, rows of new houses, and arents walking their kids to school. What you ouldn't see are piles of dirt, 20-foot-deep asms, and scrapers peeling back layers of soil.

Of course, you'd be driving by the development of Stapleton International irport, abandoned in 1995 and, after signifi- nt contamination remediation, the site of e of the largest master-planned communi- s in the country. The story of Stapleton uches many histories—Manifest Destiny d westward expansion, along with 19th- ntury industrialization, 20th-century burbanization, the rise of the aviation industry, and the limits of sprawl.

Stapleton International Airport's abandoned control tower is now an icon for the new neighborhood.

Established by Mayor Benjamin F. Stapleton in 1929, Denver unicipal Airport began on a site then mostly used for cattle grazing. It was named Stapleton International Airport in 1964 and slowly expanded to its esent 4,700 acres by 1985. Denver voters approved the construction of a w airport west of the city in 1989, ensuring that Stapleton would be closed. Sensing an opportunity, in 1990 community leaders established the private nonprofit Stapleton Development Foundation (SDF) that, with the City, would put in place a plan that by 1995—the year Denver International Airport opened—provided the basis for how land that had originally been peripheral to the city and then isolated by its nature as an airport, could be integrated into the existing neighborhood. In 1999, the city selected Forest City Stapleton, a subsidiary of the Cleveland-based Forest City Enterprises, as the master developer of the new neighborhood.

Reclaiming the tabula rasa

The Stapleton project is a kind of bizarre conflation of 20th-century planning techniques. Embodied in the new town is the Modernist urban-planning dream, evocative of Le Corbusier's 1925 Plan Voisin for Paris, where an existing piece of the city is cleared out in a tabula rasa reclamation project and regraded as if what had been had never been. In this case, the visionary architect is replaced by the demands of market research. Conversely, the Stapleton Development Plan—the guidebook to the new neighborhood produced by the SDF—neatly puts into place a New Urbanist vision for the city that emphasizes "defined centers for services and civic uses, walkable scale, access to nearby employment, diverse transportation options, and strong connections to parks and nature." Design guidelines developed by Forest City Stapleton encourage other New Urbanist strategies, including neo-historicist architectural styles and a postmodernist tendency toward the indexical mark, in this case the design decision to keep the airport's original control tower as a landmark for the neighborhood.

Although architects working at Stapleton inherit clean sites, they still respond to the environmental history of the site in their design considerations. Peter Dominick, FAIA, a principal of 4240 Architecture, has been practicing in Denver for decades and is particularly interested in the idea of how the built environment can be used as a means toward "healing." The firm built one of the first large-scale projects at Stapleton, the East 29th Avenue Town Center, a mixed-use development. "In relationship to brownfield sites, we envision ourselves knitting communities back together and healing fabrics that have been destroyed over time by the particular use that was there," Dominick said, adding that "there is a memory associated with these places that shouldn't be entirely denied."

Tom Gleason, with Forest City Stapleton, said the redevelopment reflects the will of Denver's citizens. "What we're trying to do is to implement a vision for how we reflect the surrounding neighborhood,"

CONTINUING EDUCATION

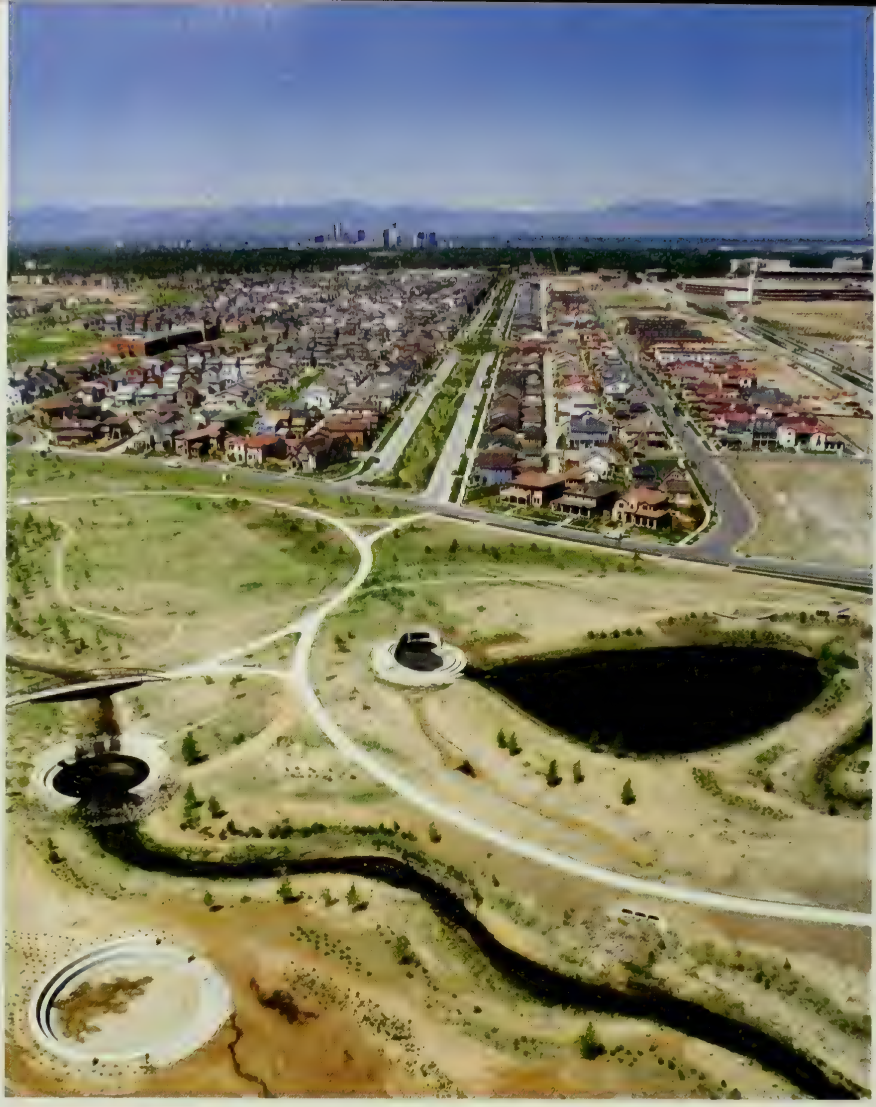
Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 154 and follow the instructions. Another opportunity to receive Continuing Education credits in this issue can be found in the sponsored section beginning on page 161.*

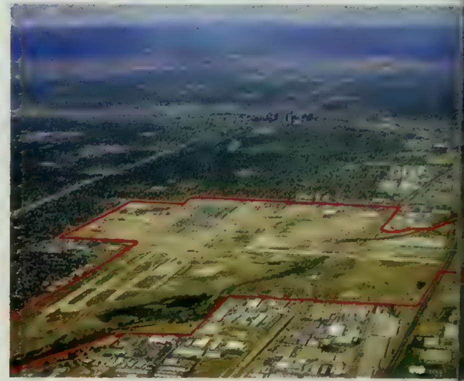
LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Describe the redevelopment project at Stapleton.*
2. *Explain how the soil contaminants were remediated.*
3. *Discuss sustainability implications for the Stapleton Development.*

this story and more continuing education, as well as links to sources, ite papers, and products, go to ***www.archrecord.com***.





Neighborhoods include a variety of home styles and sizes (left), with downtown Denver looming in the distance. An outline of the site shows the extent of development (below). New neighborhoods are built as clean land becomes available (bottom).

Gleason said. The Stapleton Design Book, developed by Wolff Lyon Architects of Boulder for Forest City Stapleton, lays out zoning requirements and architectural styles for home developers working at Stapleton, all of which is organized within a master plan developed by several contributors, including Cooper, Robertson and Partners; Calthorpe Associates; and EDAW.

Further building off sustainable principles of the Stapleton Development Plan, Forest City Stapleton produced its own sustainability master plan emphasizing connectivity between zoning districts, community education, residential construction requirements for builders to meet the Environmental Protection Agency's Energy Star and the evolving LEED residential efficiency benchmarks, the institution of recycling programs, and various alternative transportation initiatives. Gleason said all of these programs add up to houses that are 30 percent more efficient than the typical home built within existing codes. And while Gleason notes home sales are so good they have had to instigate a lottery process, buyers still must legally sign an agreement that they are aware of the previous environmental conditions of the land under their homes.

Land values, developer interest rise

Thus, the embedded environmental history of Stapleton is always already present in every aspect of its redevelopment, from the impetus to begin the plan in the 1980s to the legal documents involved in every new real estate transaction. It has certainly not deterred home buyers, includi the City of Denver's brownfields coordinator, Stacey Eriksen, who consi ered the contamination minor. "As a homeowner, I wasn't concerned all," Eriksen said. "I wanted to be closer to the city, it's less expensive, a I'm a block from an 80-acre park."

While redevelopment in many American inner cities has late focused on industrial or commercial building conversions to resident use, a low-rise residential development of the scale of Stapleton is a ra opportunity. And while the economic benefits—30,000 new residen 35,000 new jobs, and 1,116 acres of park and open space, representing $5 billion investment in the city over 25 years—of such a development a clear, brownfield redevelopment projects nationwide are only now begi ning to make more economic sense for developers.

Robert Colangelo, executive director of the National Brownfi Association, said owners and developers are beginning to look at brow fields again because of rising land values in inner cities, which is why encourages developers to involve their architects and other design co sultants in the process as early as possible so that design solutions f brownfield remediation, as well as for the project, can be consider holistically. Colangelo also cites the institution of voluntary cleanup pr grams at the state level as making it easier to remediate contaminati without onerous oversight. "In general, what's changed is the liabil relief from state programs," Colangelo said, referring to the use of

Parsons' contractors scraped nearly 5 million tons of soil, both contaminated and clean, from the surface of the abandoned Stapleton International Airport. In some areas, contractors dug down as far as 25 feet. Once the 3-to-5-foot-deep "smear zone" of petroleum contamination was removed, contractors would refill the area with clean soil. Parsons removed 1 million tons of contaminated soil, hauling it in trucks to an off-site, lined landfill where it was used to cover trash.

urther Action (NFA) letters from state agencies that mostly clear devel- pers of responsibility for environmental contamination associated with brownfield once they have cleaned it up.

Colorado's state legislature passed the Voluntary Cleanup and edevelopment Act in 1994. Colorado, as elsewhere, provides an income x credit of up to $100,000 to compensate landowners for remediation osts; the state also runs loan and redevelopment credit programs. The olorado Department of Public Health and Environment administers the oluntary cleanup program. The Environmental Protection Agency's Web te (www.epa.gov/swerosps/bf/) provides a complete resource for track- g down information for anyone pursuing brownfield remediation.

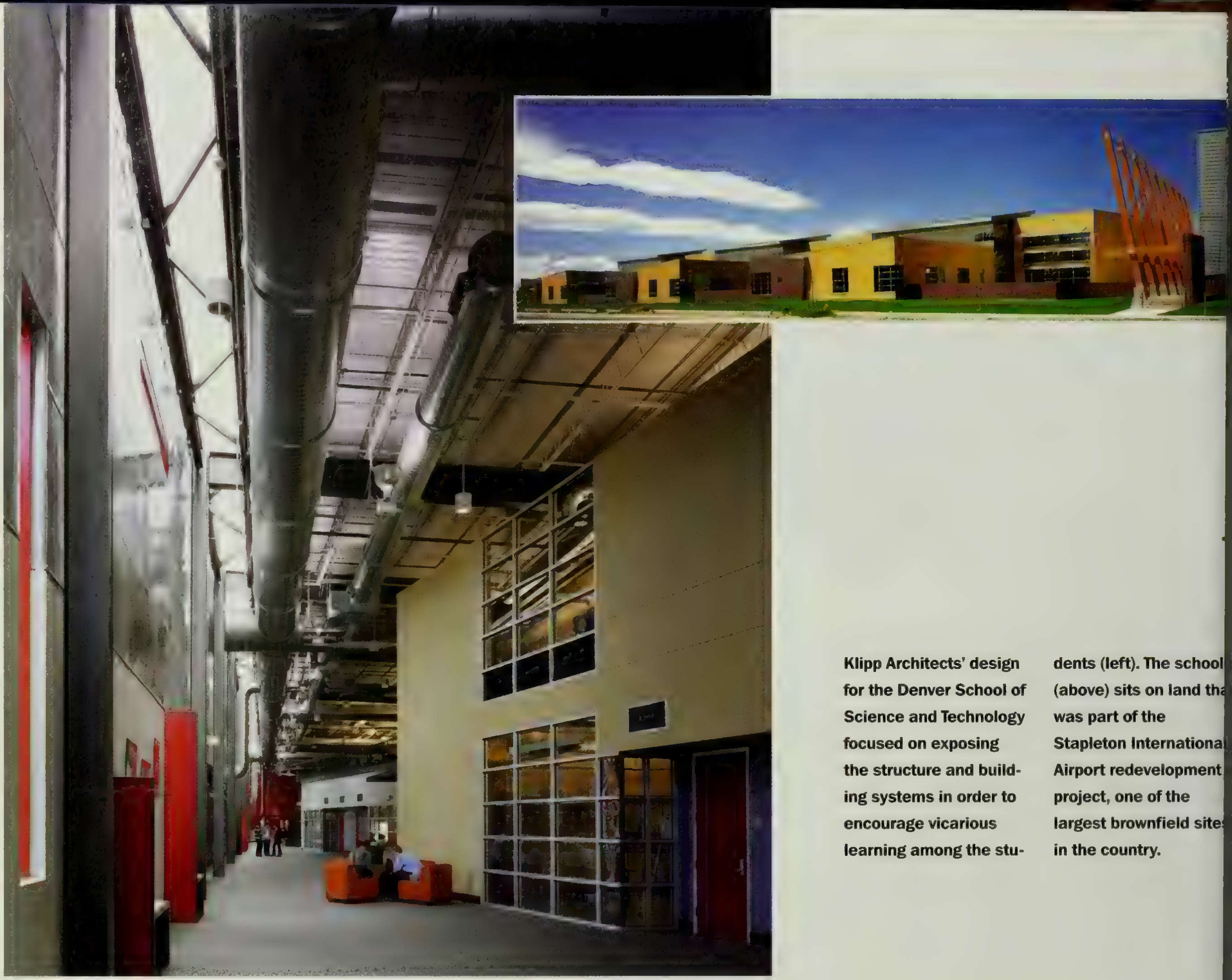
etting dirty

ne brownfield remediation at Stapleton occurred under Colorado's volun- ry program. Prior to Forest City Stapleton's involvement on-site, llowing a competitive bid process the city and county engaged Parsons, e international engineering giant, in a contract to clean the site's soil and oundwater contamination. Although the city was aware of the obvious olluted sites, such as the aircraft refueling and maintenance areas, the con- act included the directive to conduct soil and groundwater testing roughout the acreage. Tom Wood, Parsons's project manager for apleton and an environmental engineer with over 27 years experience in ownfield remediation, said it wasn't unexpected to find additional contamination on such a large site, which has led to an increased scope.

It's no surprise the major contaminant present at Stapleton was jet fuel, as well as glycol for deicing purposes and aviation fuel (AV fuel) used for smaller planes. The contaminants one looks for in the ground for these various chemicals differ greatly: For jet fuel, one would look for petroleum hydrocarbons and, in some cases, chlorinated hydrocarbons; glycol contains polypropylene and ethanol; and AV fuel, which is lighter than jet fuel, contains mostly benzene.

Parsons began the remediation process by drilling thousands of wells across the site. Where they discovered large plumes, such as at each concourse, they mapped them and plotted their trajectories through the site. More often than not, the contaminants followed logical underground routes, either along existing groundwater channels, such as the two natural creeks on-site, or along pipelines that provided easy distribution networks for liquids. The fire hydrant system, for example, consisted of a pipeline complex packed in porous gravel, as serviceable a flume for contaminated water as any.

Spilled fuel sinks through the topsoil and eventually comes to rest floating on the water table, which is between 20 and 25 feet beneath the ground across the airport. Parsons used a conventional direct-push drilling technology mounted on a hydraulic rig on a pickup truck. The drill pushes a 1-inch diameter hollow rod into the ground and exhumes a ¾-inch core of soil for examination. Wood said it was relatively easy to see contamination



Klipp Architects' design for the Denver School of Science and Technology focused on exposing the structure and building systems in order to encourage vicarious learning among the students (left). The school (above) sits on land tha was part of the Stapleton Internationa Airport redevelopment project, one of the largest brownfield site in the country.

in the field because jet fuel leaves an obvious "smear zone" of oily, black residue along the water table, similar to the ring around a dirty bathtub.

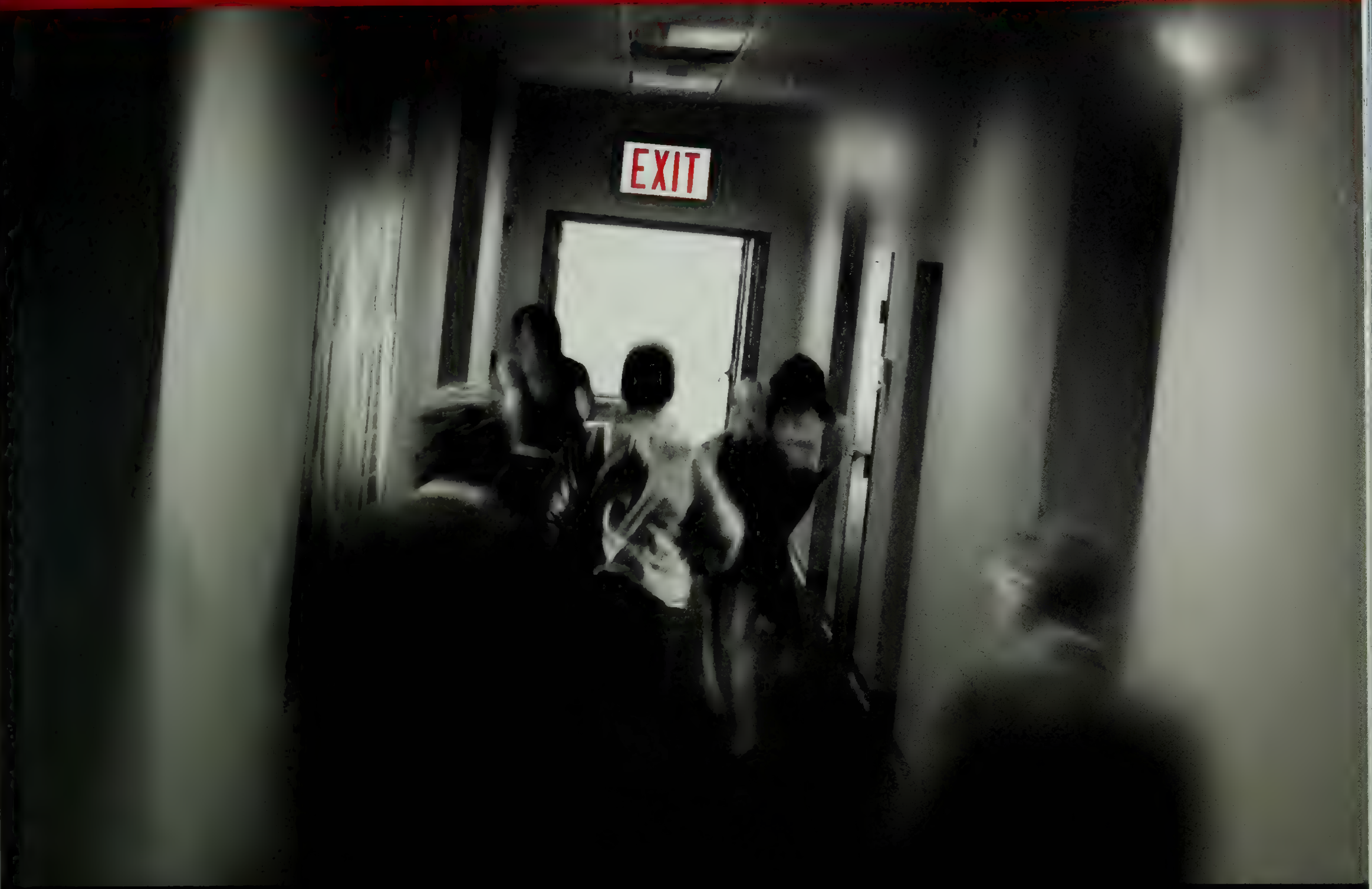
Geologists on-site paid particular attention to soil grain size as a chief indicator of conditions that would suggest an underground stream or sand channel where contaminants were likely. While visual analysis and smell provided basic evidence, Parsons utilized an infrared spectrophotometry screening method, a standard testing procedure regulated by the EPA, that would determine the amount of petroleum hydrocarbons in the soil to within 100 parts per million. While samples were sent off-site to a lab for more precise testing, Wood said it could take up to five days for results. In order to meet the schedule for turning over clean land for development, field testing was considered thorough enough to bracket off contaminated areas in order to proceed with remediation.

Glycol

Of the three, glycol is the least hazardous, while jet and AV fuel require significant remediation. Over time, glycol, which smells like sewage owing to its tendency to generate large quantities of methane, will naturally biodegrade. Excavating glycol-contaminated soil and spreading it out on the ground to "air out" is an effective remediation method, but it obviously depends on the availability of large areas of land that can be requisitioned for what could amount to months of natural degradation. At Stapleton, open land was not a problem. "The developers wanted to develop a park with a sledding hill, so quite a bit of glycol dirt went into that hill because we knew it was going to be a park and would have a lot of clean, new so packed over it," Wood said. Other glycol-contaminated dirt was allowed biodegrade and then was returned to its original location.

Jet and AV fuel

There are a number of ways to remediate petroleum contamination. Stapleton, as with the majority of sites nationwide, excavating the soil an hauling it to a landfill was the easiest method to deal with the quantiti of earth needed to be removed. However, this depended on the availabi ity of clean infill dirt, which mostly came from new developme excavations and grading, and it required ready access to an affordab landfill site. Wood noted that in denser urban areas, such as New Yo City, trucking dirt to a landfill can be prohibitively expensive. Alternati options to consider for this kind of contamination include bioremedi tion, similar to that undertaken for glycol, or cover and cap (sometim called "engineered barriers"), where the contaminated soil is simply co tained from further spreading. But, Wood adds, these methods would inappropriate for residential development. Other methods, though le popular, include soil-vapor extraction, where air blown through soil stri it of hydrocarbons and then burns off in a catalytic oxidation chamb and also phytoremediation, where specific plants are added to the lan scape to naturally clean the soil. Chemicals for dissolving contaminan can be used in some instances, but were not considered at Stapleto Wood said these other methods, in contrast to "dig and dump," wou



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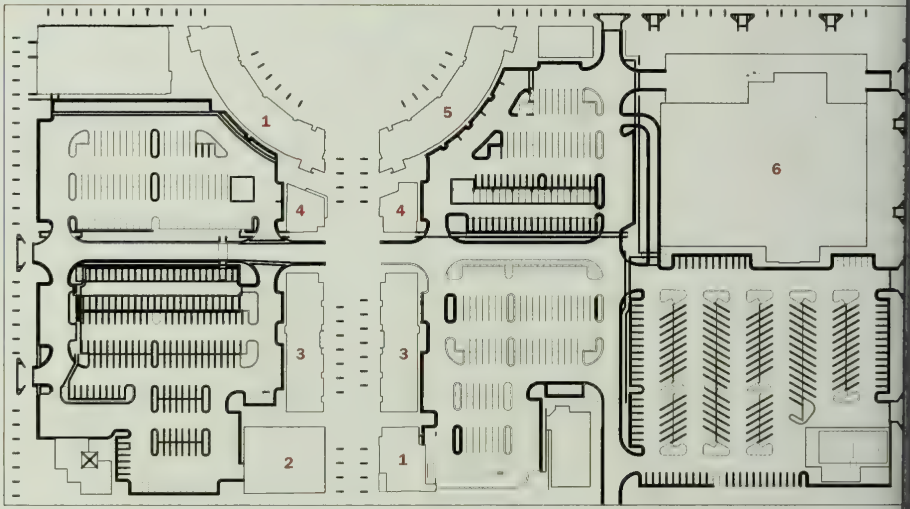
4240 Architecture's East 29th Avenue Town Center includes the Founders' Green, a large park (left), and mixed-used buildings for office, retail, restaurant, and residential development (below left). The site plan indicates the New Urbanist principles engaged in its design (below), particularly the classical symmetry of the main street.

1. *Retail*
2. *Retail/Restaurant*
3. *Office/Retail*
4. *Restaurant*
5. *Residential/Retail*
6. *Supermarket*



have taken too much time at Stapleton. Where airport buildings were preserved, remediation occurred around the perimeter and hot, soapy water was injected beneath the buildings and pumped out to "clean" the soil.

Tracking the dirt

Cleaning 4,700 acres of contaminated land presents a number of obstacles, chief among them the documentation process for distinguishing polluted zones and those that have been remediated. Balancing the assurance that the entire breadth of any one fuel plume is cleaned, thereby preventing further contamination of adjacent sites, and meeting the requirements of the developer to have key tracts of land available for use required a careful strategy of detailed mapping and repeated testing. Parsons developed a database for its findings and then translated that into a geographic information system (GIS) with three-dimensional contours of the entire site. "It was like developing a mine," Wood said, "where we would excavate the contaminated areas and mine the contaminants out of it."

Since Stapleton was to be redeveloped into primarily a residential community, the extent to which the land was cleaned was necessarily higher than if the land had been turned into a park. However, federal and state laws for brownfields lack a comprehensive scope for dealing with large sites with multiple contaminant types, viewing some as needing little oversight. Furthermore, Colorado's laws only tackle petroleum contamination levels in groundwater, not soil.

In order to assuage any lingering doubts about the site, the city developed what they called the Stapleton Numeric Criteria to addre both groundwater and soil. The SNC guideline set analytical thresho values more stringent than PPM levels required by the Colorad Department of Public Health and Environment (CDPHE) and th Colorado Department of Labor and Employment's Division of Oil an Public Safety (OPS), the state agencies that regulate various types of ha ardous materials remediation. The SNC set the standard for tot petroleum hydrocarbons (TPH) at less than 250 mg/kg in soils 20 fe below grade or to bedrock, whichever was deeper. The standard f groundwater followed the CDPHE's Water Quality Regulations, which f benzene, for example, required the maximum contaminant level (MC at wells to be within 5 micrograms per liter.

Once contamination was verified, Parsons would scrape off t soil down 20 to 25 feet and truck the soil to Denver's Arapahoe Dispos Site, a lined landfill owned by the city. Since the CDPHE didn't consid the contaminated soil to be hazardous, it could be used at the landfill cap waste. In the past five years, Parsons has removed 1 million tons soil to Arapahoe and dug up and replaced 4 million tons of clean soil.

Throughout the process, Parsons worked with supervision fro outside contractors hired by the city for quality control purposes. Aft Parsons would complete work in one area and monitor groundwater qua ity for a given amount of time (sometimes nearly a year), they submitt reports to the CDPHE and would in return receive a NFA letter effectiv declaring that portion of the site to be clean. Only upon receipt of the N

The architect wanted a "candlelight" effect for the interior of the new Science & Technology building at York Community College in Rock Hill, South Carolina. But while the environment had to be warm and inviting, it also had to be smart — the school wanted something that would require minimal maintenance. The people of CEMEX recommended Polished Designer Stone™ with Shot Blast accents. When the project was finished, CEMEX received an A+.

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letter could the city then turn around and sell the property to Forest City Stapleton. All in all, Wood says, Parsons received 20 NFA letters and left the project on good terms with the city and state.

Filling the void

As portions of the site became available for development upon Parsons' completion, Forest City Stapleton began making good on its commitment to implement the development plan. Two new projects stand out as examples of how an architect approaches a site like Stapleton, given its environmental history and its extraordinary status as a second chance for urban Denver. 4240's Town Center project, previously mentioned, opened in 2003 and incorporates a range of sustainable measures such as grass swales for storm-water runoff, formaldehyde-free materials, 100 percent recycled steel, 40 percent recycled materials in all concrete, operable windows, and sunshades. More important, 4240's Dominick said, is the flexibility of the buildings, where unrented residential space could be easily converted into commercial space as needed.

Following the progressive bent of the community, the Denver School of Science and Technology opened as a charter school in 2004. Designed by Denver-based Klipp Architects, the school focuses on math, science, and technology and utilizes the building as a teaching tool for students. Brian Klipp, FAIA, said brownfields offer an opportunity to get it right. "I think there is an opportunity for the client to be more committed to sustainability because of the nature of the site we are working on," Klipp said. "It allows us to do something architecturally unconventional." In that vein, Klipp Architects designed the school with exposed structures and systems to encourage vicarious learning, as well as with no-brainer strategies like increased daylighting in classrooms and corridors.

Where it made sense, original airport buildings were maintained. Aside from the control tower, one hangar preserved as the site of Pope John Paul II's visit to Denver in 1993 has been converted into a television studio. The redevelopment plan seized the opportunity to reintroduce two submerged waterways, Sand Creek and its tributary, Westerly Creek, which are both now major features of Stapleton's parklands. The acres of concrete runways were removed and recycled into a product lovingly called "Staplestone," which has been used on-site.

While not every brownfield project will have the incredible amount of players involved as at Stapleton—government agencies, politicians, developers, contractors, architects, planners, citizens, and visionaries—the process remains generally similar. In the way that many older cities have redeveloped abandoned waterfronts, once the major hub of industrial activity, Denver's isolated location and relatively recent history resulted in its airport acting that role. As Dominick offered, the West's great resource has been its environment, and unchecked growth has destructively influenced that. "This community is really optimistic and opportunistic," Dominick said. "I think right from the get-go, the primary goals of this project were really to talk about sustainability and green development." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "An Abandoned Airport Brownfield Takes Off" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 241).**
- **Fill out and submit the AIA/CES education reporting form (page 241) or download the form at www.archrecord.com to receive one AIA learning unit.**

QUESTIONS

1. How is the development at Stapleton International Airport different from the redevelopment in many American cities?
a. it focuses on residential development
b. it focuses on commercial building conversion to residential use
c. it focuses on low-rise residential development over a large area
d. it focuses on brownfield redevelopment

2. Home sales at Stapleton were which?
a. so good that a lottery process was used
b. good enough that developers tripled their investment dollars
c. supported by rebates from the energy companies
d. for low-income families

3. The New Urbanist vision for the Stapleton Development Plan emphasizes all except which?
a. walkable scale
b. diverse transportation options
c. strong connections to parks and nature
d. reuse of existing structures

4. The sustainability master plan resulted in houses that were which?
a. 30 percent more expensive than other houses
b. 30 percent more energy efficient than homes built within existing building codes
c. 30 percent less dense than other low-rise housing developments
d. 30 percent less desirable than other housing developments

5. The major soil contaminant at Stapleton was which?
a. aviation fuel
b. glycol
c. jet fuel
d. chlorine

6. Spilled fuel sinks through the topsoil and is found where?
a. in the bedrock
b. on the water table
c. in the earth's core
d. in the stratosphere

7. How was the soil containing glycol cleaned?
a. it was spread out on the ground to air out
b. it was spread out and sprayed with chemicals
c. it was washed with sand and gravel
d. the contaminants were blown out with air and burned off

8. The petroleum-contaminated soil was remediated by which method?
a. contained from further spreading by engineered barriers
b. hydrocarbons were blown out of the soil and burned
c. plants were added to naturally clean the soil
d. the soil was hauled to a landfill

9. Petroleum contamination is addressed by Colorado law in which way?
a. in terms of oily soil as a landfill cover
b. in terms of groundwater
c. in terms of total petroleum hydrocarbons in the soil
d. in terms of 20 feet below grade or bedrock

10. The control tower at Stapleton International Airport was preserved for which reason?
a. to use as a security vantage point
b. it could not legally be removed
c. it could not physically be removed
d. it provided a landmark for the neighborhood

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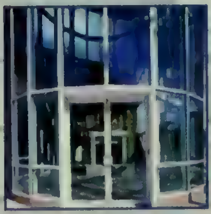

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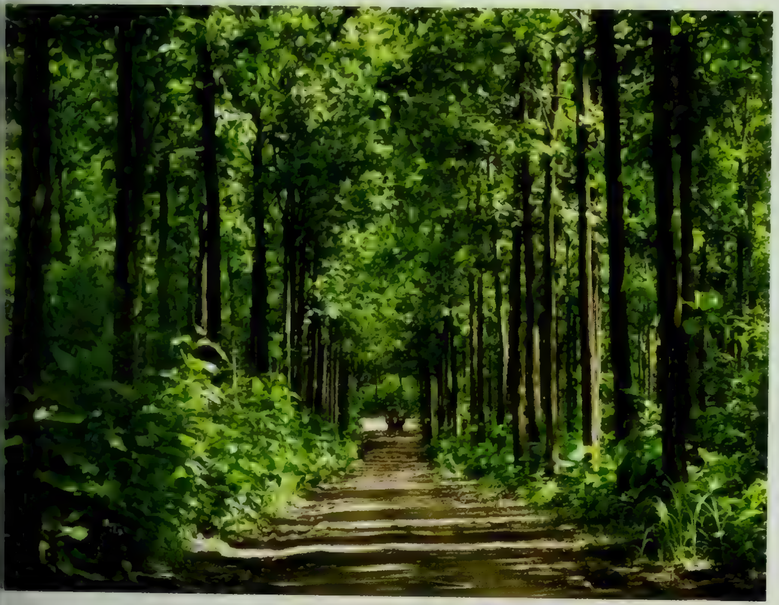
Tech Briefs U.S. Green Building Council tackles contentious materials credits • Architects surveyed on building information modeling • U.S. mayors group endorses zero carbon targets

Proposed LEED changes intensify debate over recognition of wood certification systems



e Forest Stewardship Council, which certified this teak plantation in South America, is e sole wood certification system currently recognized by LEED.

n response to a long-escalating ontroversy over the recognition of ertified wood products by its LEED ating system, the U.S. Green Building ouncil (USGBC) is considering revisng two of the metric's credits that leal with material and resource use.

Late in May, the council's board f directors asked the LEED steering ommittee, the group responsible for aping the rating system, to ldress recommendations outlined a white paper on the topic. The oposed changes would open the or for recognition of wood certifition systems favored by the timber dustry, such as the Sustainable restry Initiative (SFI) and the nadian Standards Association SA). Many in the environmental mmunity consider the forest manement practices allowed under ese systems less environmentally eferable than those of the Forest ewardship Council (FSC)—the sole od certification system currently ognized by LEED.

One motivation for considering credit revisions was to gain a wider foothold for green building practices. "Wood certification had become a significant issue at the state and local level and had become a distraction" from the council's mission of market transformation, says Michelle Moore, USGBC vice president.

The changes, if implemented, would double the number of LEED points a project could earn for wood use. "It is justifiable to give additional weight to wood. It is produced by renewable energy [in the form of] sunlight and photosynthesis. It has a high yield, is reusable, and is ultimately biodegradable," says Alex Wilson, author of the white paper, and executive editor at Building Green. [Note: RECORD publisher McGraw-Hill Construction and Building Green are partners in a magazine for USGBC members about sustainable design.]

Wilson's paper suggests broadening the current credit that rewards projects for use of building materials derived from rapidly renewable sources—those regenerated in less than 10 years—to one that recognizes all biobased materials, including wood. With this change, wood certified by FSC could receive credit, in addition to wood certified by SFI, CSA, and possibly other organizations.

A comparison of standard forestry and agricultural practices is the basis for the recommendation. Agricultural products now recognized by the rapidly renewable credit, like those made from soybeans or cotton, "often carry significant environmental burdens, [therefore] rewarding rapidly renewable products over wood-derived products may not be justified," says the paper.

In addition to the move from a rapidly renewable to a biobased credit, the paper suggests changing a current credit that rewards projects for use of FSC-certified wood only. The revised credit would recognize other biobased materials that satisfy still-undeveloped "robust" criteria.

The proposals are receiving mixed reviews from industry stakeholders. The suggested biobased credit is "an exciting development," says John Mechem, a spokesperson for the American Forest & Paper Association, a wood products trade group and creator of the SFI rating system. However, he urges the USGBC "to retain a credible independent consultant" to assist with formulating the criteria for certification system assessment.

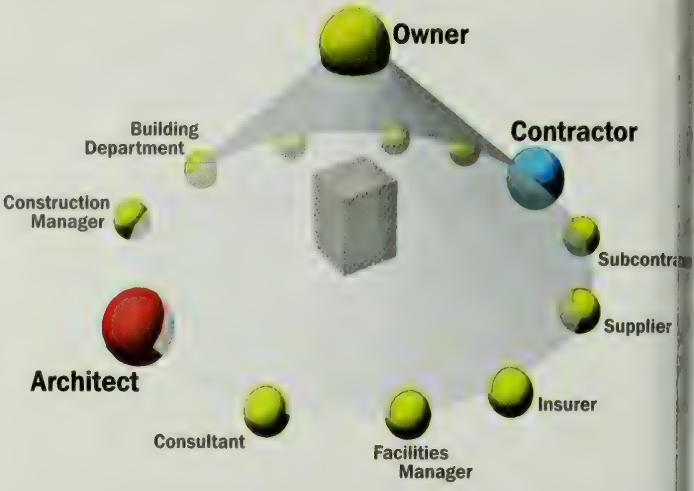
Other stakeholders worry that inclusion of certification systems previously not recognized by LEED in the proposed biobased credit would be premature. "I am pleased to see wood treated as an environmentally beneficial building material," says Liza Murphy, a senior manager at the Rain Forest Alliance, a nonprofit FSC certifier. She adds, however, "I encourage the USGBC to have a conversation about the on-the-ground differences among certification systems even before putting the question before its membership."

Some sources are critical of the paper's reliance on life-cycle assessment (LCA)—a methodology that takes into account factors like a material's embodied energy and projected life span. According to Dan Harrington, product development director for EcoTimber, the paper does not "address downstream water quality, seasonal water retention, local and global climate change, and a host of other complex impacts that are difficult to assess using LCA." EcoTimber is a supplier of FSC-certified wood products.

Rob Watson, a USGBC board member and senior scientist at the Natural Resources Defense Council, calls the white paper's suggested credit language "a first cut at a very complicated issue." Before adoption, the changes must go through several steps, including review by the council's technical advisory group for materials and resources, a public comment period, and balloting by the full USGBC membership.

"Some have characterized this [white paper] as the end of a process, but it is really the beginning," says Watson, suggesting that quick resolution is unlikely. "This is one of the most complicated and loaded issues the council will face."
Joann Gonchar, AIA

To architects, building information modeling is still primarily a visualization tool



Almost three quarters of U.S. architecture firms are using 3D or building information modeling (BIM) for at least one phase of their work. The statistic comes from a survey conducted by a joint committee of the American Institute of Architects and the Associated General Contractors of America.

The results of the questionnaire, completed online in December and January by 1,266 AIA members, along with those of a similar survey of construction firms to be administered later this year, will be used to inform the initiatives of the joint committee and the individual organizations.

Of the respondents to the survey of architects, 36 percent are in firms with fewer than seven employees. In the last completed fiscal year, 33 percent had gross billings of $500,000 to $5 million, and 58 percent spent less than 5 percent of their operating budget on 3D modeling/BIM technology.

Of the 74 percent of participants that reported using 3D or BIM, 98 percent use the tools for renderings and presentation graphics related to conceptual design. Of this group, many are using the technology for simple geometric massing and for adding material elements and details to drawings.

Just over one third of respondents using 3D/BIM reported using it as a construction resource, for tasks like conflict identification. However, most firms using the technology for this phase still produce 2D drawings for permitting, shop drawings, record drawings and client reviews.

About 34 percent are using it for "intelligent modeling," or for generating information like cost or quantity data. Nearly all using the technology for this purpose included structural systems in the model. Twelve percent are using it for post-occupancy facility management.

CAD software developers say the results are encouraging, even though most firms are using 3D/BIM primarily as a visualization tool, and are not yet taking full advantage of its capabilities. "Thirty-four percent of firms using BIM 'intelligently' is great, [even if it's] a self-selected respondent base. It's still early," says Phil Bernstein, FAIA, a member of the joint committee and vice president of Autodesk's Building Solutions Division. More widespread adoption of BIM depends on "creating a closer relationship between the activities of design, engineering, construction, and building operation."

The National Institute of Building Sciences hopes to facilitate this integration and sharing of information through the creation of a national BIM standard. The goal of the project is to "improve performance of facilities over their full life cycle by fostering a common, standard, and integrated life-cycle information model for the architecture, engineering, construction, and facilities management industry," according to NIBS.

The organization hopes to release the first module by year end and is now testing the link between CAD and a geographical information system. Such an interface could assist in locating nearby police stations, for example, and would be useful to first responders, insurers, and property owners, says Earle Kennett, NIBS vice president. *J.G.*

Mayors move to halt climate change with goals for carbon neutral buildings

An ambitious set of performance targets for buildings has won the support of the nation's mayors. At a meeting in Las Vegas early last month, the U.S. Conference of Mayors, a group representing cities with a population of 30,000 or more, unanimously approved a resolution calling for an immediate reduction in consumption of energy generated from fossil fuels by 50 percent for all new and renovated buildings.

The measure, known as the "2030 Challenge," was sponsored by Mayors Richard Daley of Chicago, Greg Nickels of Seattle, Manuel Diaz of Miami, and Martin Chavez of Albuquerque. It calls for further reductions in fossil-fuel use of 10 percent every five years, with an ultimate goal of carbon neutrality by 2030. The resolution's performance targets parallel those outlined in a sustainable-practice position statement adopted late last year by the American Institute of Architects board of directors.

Prior to passage of the resolution on June 5, the group's energy committee debated whether the intent of the measure was to target municipal buildings or all buildings, according to Paul Mendelsohn, AIA, senior director of state and local affairs. The committee, and ultimately the full body of mayors, approved language that would apply to all buildings. "If you constrain the measure to only city-owned buildings, then you profoundly reduce the desired outcome," says Mendelsohn.

In order for the measure to have real impact, it must now be translated into enforceable policy, says Ed Mazria, AIA, a Santa Fe architect. "Now the resolution needs to be codified in executive orders and legislation, and it must work its way into building codes," says Mazria, who has done extensive research on building energy consumption and on the link between the built environment and climate change. He addressed the mayors group at a mid-May summit on energy and the environment held in Chicago, where he urged adoption of the resolution.

In addition to regulations, incentives can also be an important tool for encouraging private developers to build more efficient buildings, says Sadhu Johnston, commissioner of Chicago's Department of the Environment. He points to his city's recently institute expedited permit process for developers of green buildings.

Passage of the carbon neutrality measure is one sign of more public visibility for architects, say some sources. "I am hopeful that this does indicate a new role for architects," says RK Stewart, FAIA, a principal in the San Francisco office of Gensler and 2007 incoming AIA president. "Now architects are engaging in debate about issues of long-term benefit to the public, not only on sustainability, but also on topics such as the creation of livabl communities." *J.G.*

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Universal Design: Integrating Innovative Products and Spatial Design

ovided by Whirlpool Corporation
Mark R. Johnson, FAIA

wo decades ago, architect Ronald Mace, FAIA, coined the term "universal design" calling for the design of products and the built environment to be usable by all people, in the greatest extent possible, without the need for adaptation or specialized design. that time, Mace was particularly responding to the lack of adequate barrier-free hitecture to meet the needs of the physically handicapped. Yet, even then, Mace had a ch broader application in mind—that all spaces, features, and aspects of all things uld be designed to be usable by and marketable to people of all ages and abilities.

ay, universal design is making its way into the collective consciousness, spurred on by needs of an aging population. Often referred to as "lifespan" design, the new focus is rovide a product—be it a home or an appliance—that recognizes, respects, values and mpts to accommodate the broadest possible spectrum of human ability.

lders have responded to this trend by incorporating wide doorways and stacked closets new homes that can be converted into an elevator, as well as locating the master room suite on the main floor. Appliance manufacturers are also addressing the universal ds of product users. Usability and functionality rank high on consumers' wish lists. As histicated technology infuses product design, manufacturers find they must be even e aware of the human interchange with the product, and strive to make the operation fortable both ergonomically and cognitively.

emerging trend of "aging in place" will continue to have a huge impact on life-style siderations. A survey by the American Association for Retired Persons in 2000 suggested 72 percent of the population aged 45 and over want to remain in their own home as grow older. More and more attention is being paid to a person's physical and psychological changes and how that interfaces with one's environment. It's easy to see why universal design is catching on. Mace was adamant in emphasizing the need to simplify. He wrote, "The design of products and the environment should be usable by all people in the greatest extent possible, without the need for adaptation or specialized design." The idea is to integrate accessibility into product design, to make it invisible, to strive for quality aesthetics.

The front controls of the KitchenAid Pro Line cooktop paired with an accessible installation create a great solution in universal design.

CONTINUING EDUCATION

Use the learning objectives below to focus your study as you read **Universal Design and Appliances.** To earn one AIA/CES earning Unit, including one hour of health safety welfare credit, nswer the questions on page 166, then follow the reporting nstructions on page 242 or go to the Continuing Education section on *rchrecord.construction.com* and follow the reporting instructions.

EARNING OBJECTIVES

fter reading this article, you should be able to:

Learn how the need for accessible design lead to the development of universal design.

Understand the key principles of universal design and how they apply to the practice of architecture.

Identify how universal design solutions have been incorporated into appliance design.

From Accessibility to Universal Design

It's estimated that nearly 50 million people in the United States have at least one disability that affects their everyday life. Is there a civil right for a barrier-free environment in this country? Yes, Congress thinks so, and in 1990 adopted the American Disabilities Act, which is the first truly anti-discrimination act against persons with disabilities in this country. However, Barrier-free activists had made great inroads three decades earlier with the publication by the American National Standards Institute of the first codes and standards: A117.1-Making Buildings and Facilities Accessible to and Usable by People with Disabilities. It stated that for a building to comply and be usable, it had to have "a reasonable number but always at least one" of the features it described, i.e., one accessible door, one accessible toilet room, etc. A117.1 provided some relief for handicapped persons however, it was just a minimal beginning effort in that most of the regulations and codes that adopted the standard have never mandated truly accessible or barrier-free building and facilities, but rather only parts and pieces of buildings were required to be accessible.

Under A117.1 only certain building types are required to comply—just government owned buildings or federally funded projects. Subsequent standards included minimum specifications for accessible features in houses such as kitchen sinks, bathtubs, toilets, etc. However, these specifications were adopted and mandated in most localities only for applications in multifamily housing programs, such as publicly or managed apartment buildings.

Whirlpool Duet controls address ergonomics, readability, and cognitive usability in the Fabric Care Studio.

Section 504 of The Rehabilitation Act of 1973 mandated that 5 percent of the apartments must be wheelchair accessible in programs receiving federal financial assistance. An additional 2 percent had to be equipped for visually impaired and blind residents and another 2 percent for hard-of-hearing and deaf tenants. Therefore, the 1973 legislation only affected selected features in a small number of rental apartment in publicly assisted housing projects.

The Fair Housing Amendments Act (THAA) of 1988 established a special and different accessibility standard for rental multifamily housing, which mandates a lower level of accessibility but covers a great number of apartments, including all units on ground floors and all units on floors served by elevators. The minimum level of accessibility provided is an improvement over many conventional and inaccessible apartments, but it is not sufficient for many people with disabilities and is far from being barrier-free or accessi In 1990 Congress passed the American Disabilities Act that guaranteed for people w disabilities equal opportunity in accommodations, commercial facilities, employme transportation, state and local government services, and telecommunications. A Guidelines set rules for public buildings, but only pertain to government-funded housin

KitchenAid Pro Line controls address ergonomics, readability, and cognitive usability in the Luxe Laundry.

Throughout this time, accessible design came to be identified with the use of physi devices—expensive assistive technology devices, durable medical equipment, stainl steel and chrome and awkward features such as ramps that gave houses a clinical lo Builders, owners, and the public resisted the inclusion of "barrier-free" or accessibi features as the aesthetics were usually undesirable and seemed to decrease marketabi Accessibility was more of a burden than a challenge.

Ronald Mace and his Center for Universal Design at North Carolina State University wor hard to dispel this notion. He and other proponents of universal design advocated g aesthetics—finding solutions that are "invisible." The solution: use color, scale, text line, and light to create spaces that have harmony, balance, and proportion. The theory that universal design is not a new science, style, or unique in any way. It requires only awareness of need and market and a common sense approach to making everything tha designed and produced usable by everyone to the greatest extent possible. This mi involve only slight changes in simple things—the shape of an element, its placemen size, the force necessary to operate it, or the way in which the user must interact the item.

Provide Options for All People

The idea for universal design in housing grew out of the recognition that, because mos the features needed by people with disability are useful to others, there is justificatio make their inclusion common practice. Examples include: raising electrical receptacle 15 inches or 18 inches above the floor eliminates the need to bend over as far and ma it easier for everyone. Mobility is much easier in houses with stepless entrances and w door and hallways.

Some universal design features create experiences many people have not had before. example, when well-designed bathrooms with extra floor space to accommodate user mobility aids are perceived as luxurious, and people revel in their now-found ability to furniture in the bathroom. A chair, bookcase, towel rack, or étagère can give bathroom marketable elegance and utility and can be removed if the space is ever neede accommodate a disabled family member of friend.

In housing, homeowners and builders began to recognize the universal design features would support them into the future without taking away from the home's appearance, s of which we mentioned above:

- Wide doors
- Stacked closets that can be converted into an elevator
- Kitchen with many easy-to-reach amenities, such as undercounter dishwashers refrigerator drawers
- Main floor bedroom suite

Incorporating universal design into the kitchen includes not only the location of applia but their ease of operation as well. A simple change in the design of an appliance can m a big different in accessibility. For example, a wall oven that opens on the side instea the top makes it easier for a person in a wheelchair to reach inside the oven. Appli manufacturers are rethinking everything from the size of knobs to the shape of a handle in order to make appliances more user-friendly. Appliance manufacturers combining a sense research-based ergonomics with ease-of-use features, to cr products that are convenient for everyone.

Drawer dishwashers are a good option for universal design by mounting the unit higher in a pull-out configuration.

increased visibility, some of the new features include:

arger-print labels on appliances

arge-print owner's manuals

ight-colored ranges with contrasting dark cast-iron elements to help those with imited vision

ryers with audible lint chime when it's time to clean the filter

ide-swing doors on wall ovens and microwaves that provide easier and safer access

efrigerators that allow people in wheelchairs or individuals under five feet easier ccess to both frozen and refrigerated food

djustable slide-out refrigerator shelving that can be set at more convenient heights

mportant to note that advocates maintain that universal design is a set of principles, a standard or code, and that it goes far beyond the minimum specifications and ations of legislated mandates for accessible and barrier-free facilities. Think of it this Codes and standards tell you what you must you. Universal design concepts open up world of opportunity to what you can do.

e Seven Principles of Universal Design

by the Center for Universal Design, a group of architects, designers, engineers, and gn researchers established these seven principles. These principles they suggest, are icable to a wide range of design disciplines, including architecture, interior design, and strial design. They can be used to evaluate existing products, guide the design process, ucate designers and consumers about the need for universal design.

l explanation of the seven principles listed below is found in the article of this title on itectural Record Continuing Education web site. You will also find a method in which to these seven principles to evaluate the universality of a design.

seven principles of universal design are:

uitable Use: The design does not disadvantage or stigmatize any group of users.

exibility in Use: The design accommodates a wide range of individual preferences and ies.

3. *Simple, Intuitive Use:* Use of the design is easy to understand, regardless of the user's experience, knowledge, language skills, or current concentration level.

4. *Perceptible Information:* The design communicates necessary information effectively to the user, regardless of ambient conditions or user's sensory abilities.

5. *Tolerance for Error:* The design minimizes hazards and the adverse consequences of accidental or unintended actions.

6. *Low Physical Effort:* The design can be used efficiently and comfortably, and with a minimum of fatigue.

7. *Size and Space for Approach and Use:* Appropriate size and space is provided for approach, reach, manipulation, and use, regardless of the user's body size, posture, or mobility.

These goals should be reached to the greatest extent possible by simplifying design at minimal extra cost. Universal features are generally standard building products or features that have been placed differently, selected carefully, or omitted. Consider the following:

- Accessible route from vehicle drop off or parking
- Covered entryway
- Package shelf or bench to hold parcels, groceries, etc.
- Lever door handles
- Electrical receptacles at 18-inch maximum height

(For a more complete list see the corresponding article on the Architectural Continuing Education web site.)

KitchenAid undercounter beverage centers not only allow accessibility with storage below the counter surface, but also have a glass front to enable the user to see the contents before having to open the unit.

Modular work surfaces and storage pedestals elevate the frontloading Whirlpool Duet washer and dryer, eliminating uncomfortable bending as well as creating a sorting/folding area.

Universal design is closely associated with human-factors design, although the latter is considered a more rigorous design process. The focus here is on human behavior and human interaction with space, with regard to aesthetics (including color and texture), form, scale, proportion, function, daylight, equipment, and furnishings. Also of importance in human-factors design is establishing a sense of ownership, community, presence, comfort, security, performance, and privacy. In the end, the product is designed "for the user" rather than "forcing" the user to accommodate the design. It's interesting to note that human-factors design is modeled after the process used by the U.S. military in designing its products and facilities. It is a rigorous step-by-step formula.

Perhaps more closely aligned with universal design, particularly in regards to product design, is ergonomics. Generally, ergonomics has come to mean "making something easier and less stressful to use." It is, however much more than that—a well-defined scientific discipline with broad applications and implications in the work environment, product design, and architecture. The uniting element is the assessment of the physical, psychological, and social needs of human beings in all design projects.

It's not hard to see the relationship with universal design. Industrial designers, in particular, see ergonomics as a major part of universal design. Again, product design, like architecture, has no legal requirements for accessibility, but industrial designers do recognize the market need and opportunity to focus on the preferences of users. And the changing demographics of the aging population have established a clear call for universal design.

As one industry spokesman suggested there are three primary drivers of universal design the manufacturing of appliances: ergonomics, visual acuity, and cognitive recognition.

Ergonomics, as stated above, examines the relationship between man and machine, mak changes where possible for healthier and more satisfying work conditions. For instance, ergonomic chair that improves our posture and reduces stress comes to mind, ergonomics can be an important consideration when designing door handles and levers the placement of an oven door or the height of a dishwasher.

Visual acuity, the second factor, addresses the needs of those vision ranges from sli impairment brought on by aging to individuals with severe difficult seeing. Design chan to accommodate them can also be welcomed by those without disabilities. Placement a size of lettering is important as is assess. For example, a dishwasher is available for wh the position of the door is perfectly balanced and can be opened to any angle to bring controls to an optimal viewing position.

Cognitive recognition can be described as our ability to adapt to new technology. We the old ways of doing things, and often need help to make a technological leap. example, a home cooking enthusiast may aspire to be more like a professional chef, wh would mean expanding cooking options as much as possible at home. Yet, the instructi for the new convection oven may seem confusing or complicated. In this case, the applia features an easy convection button that makes the cognitive leap for the consumers so t can bake as they have always done so in the past; a microchip makes the adjustmen convention technology.

KitchenAid Pro Line laundry pedestals incorporate a shelf to hold laundry baskets, allowing the user to move clothing articles more easily from washer to dryer while reducing bending.

A balanced dishwasher door with top-mounted controls can be positioned at any angle for ease of use.

e Seven Principles and Appliance Design

ustrial designers are enthusiastic adopters of the concepts of universal design. Why? field has no standards for accessible design yet industrial designers see the value of using on the needs and preferences of users. Designing a user-friendly product is a high rity in home appliances to achieve success as a manufacturer.

yourself if these features promote the Center of Universal Design's seven principles ed above. (For more information see the corresponding article on Architecture Record's tinuing Education web site.) The goal is to address the accessibility of cabinets, ntertops, and controls in the kitchen by all people and to the greatest extent possible. doesn't have to result in increasing costs or unattractive aesthetics but it does require understanding and consideration of the broad range of human abilities throughout a son's lifespan.

sider control of the appliance. Issues include:
nstructions close to user for easy viewing
nob shape and size for ease of manipulation
lectronic interface—intuitive function
ardware that is easy-to-use, offering flexibility with little or no strength
oop handles pulls on drawers and cabinet doors in lieu of knobs
arger, easier-to-read graphics on knobs and elsewhere on appliances
dvanced preprogramming options for ease of cooking
eheating and browning functions using "sensing technology"

iance height is also of great significance. Consider:
cook top with knee space below, allows someone to use the appliance from a seated position
cook top or range with staggered burners and front- or side-mounted controls o eliminate dangerous reaching over hot burners.
Dishwasher raised on a pedestal or drawer unit so that the top rack is level with he adjacent counter top
ront loading washers and dryers positioned side by side for staging laundry

21st Century Appliance Design

Universal design principles have already shaped appliances. Consumers may not be aware of this trend for such improvements may have be considered advances in usability and justified as meeting consumer demands though not explicitly promoted.

When specifying appliances, consider the following—you will be familiar with some features; others will be on the market soon.

The Kitchen

Ovens
- Side-opening ovens for easy access
- Easy-to-read and to use time and temperature displays
- Increased glass viewing area and lighting for with better visibility
- Racks that easily pull out on ball-bearing extensions
- Oven racks with edges ergonomically designed to fit an oven mitt

Cook tops
- Stagger burners, cool, or automatic shut-off burners
- Smooth electric cook tops
- Front or side-mounted controls
- Cook tops of a variable surface height
- Open knee space below cook tops or sinks to increase accessibility

Dishwasher
- Front-mounted controls
- Raised control buttons
- Dishwasher installed on raised platform
- Under-the-counter or drawer dishwasher
- Full-extension racks
- Smaller-capacity, top-loading dishwasher installed into the counter surface
- Door with flexible positioning
- Height adjustable components

Microwaves
- Controls that require minimal programming
- Controls detectable by touch and require minimal finger use
- New appliances that combine multiple technologies, like microwave and convection, to streamline and simplify the cooking process.

Refrigerators
- Under-the-counter or drawer-type refrigerators help place food items within easy reach
- Clear, pull-out shelves, drawers, and tilt-out door bins allow easy viewing of content and bring hard-to-reach items closer to the user
- Full-height handles on refrigerator doors

Laundry Care

Washers and Dryers
- Front loading
- Pedestals—10-inch, 13-inch, and 15-inch tall
- New 15-inch tall can store large bottle or boxed detergent
- 10-inch—good for wheelchair access or short individual

The Future and Consumer Preferences

According to the National Kitchen and Bath Association, 38 percent of consumers are consideration universal design elements for their homes. We're looking at an aging population and with it even more demands for a user-free environment. No doubt universal design solutions in housing and appliances will continue to grow—and because they are meant to be "invisible"—we may not even know it is happening. ■

CLICK FOR ADDITIONAL SUPPLEMENTAL READING
The article continues online at ***http://www.archrecord.com/resources/conteduc/archives/0607whirlpool-1.asp***

AIA/ARCHITECTURAL RECORD **CONTINUING EDUCATION** Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Learn how concern the need for accessible design lead to the development of Universal Design.*
- *Understand the key principles of Universal Design and how they apply to the practice of architecture.*
- *Identify how Universal Design solutions have been incorporated in appliance design.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 242. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. Universal design calls for products and the built environment to be:
  a. Designed just for the handicapped
  b. Technical in appearance and operation
  c. Supplements to basic design
  d. Usable by all people to the greatest extent possible

2. What percentage of the population over age 45 is reported to favor "aging in place."
  a. 10 percent
  b. 49 percent
  c. 72 percent
  d. 88 percent

3. What federal law sets the rules for accessibility in public buildings?
  a. DOE
  b. ADA
  c. DAA
  d. EPA

4. Universal design is a:
  a. Science
  b. Set of principles
  c. Architectural style
  d. Marketing strategy

5. One of the seven principles of Universal Design is:
  a. Size and Space for Approach and Use
  b. Inequitable Use
  c. No tolerance for Error
  d. Maximum Physical Effort

6. Universal design is closely associated with:
  a. human-factors design
  b. ergonomics
  c. human-factors design and ergonomics
  d. neither

7. Which is the best Universal Design solution?
  a. Cook top with controls at back
  b. Front loading washer and dryer without pedestals
  c. Refrigerator with fixed, opaque shelves
  d. Cook top with knee space below

8. The two other primary drivers of universal design in the manufacturing of appliances, besides ergonomics, are:
  a. visual acuity and posture
  b. posture and positioning
  c. visual acuity and cognitive recognition
  d. positioning and cognitive recognition

9. Which of the following is not an important consideration in a universally designed kitchen?
  a. Loop handle pulls on drawers
  b. Cook top with knee space below
  c. Television at eye level
  d. Knob shape and size for ease of manipulation

10. A simple universal design solution is to raise electrical receptacles how many inches above the floor?
  a. 4 inches
  b. 15 inches to 18 inches
  c. 25 inches
  d. 4 inches to 10 inches

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Residential

While preserving a symbol of our agricultural past, architects teach the old barn new tricks

BRIEFS

KB Home and Martha Stewart Living Omnimedia are building their second community together. Located in suburban Atlanta, the development contains 800 houses whose architecture is inspired by the domestic style guru's design sense. Stewart's company first partnered with the builder on a development this spring in North Carolina and is also creating a line of interior fashions exclusively for KB Home's customers. For more, visit www.kbhome.com.

Mobile homes got a bad rap after Hurricane Katrina, but students at the University of Colorado at Boulder may help change negative perceptions with a complete makeover of an old trailer. Starting with nothing but the chassis, they are developing a prototype low-cost housing unit called TrailerWrap that will incorporate efficient insulation and sturdier materials—all with an eye for attractive design. They hope to complete the transformation this fall. See plans at www.trailerwrap.net.

Topography and groundwater availability are key factors in determining the degree of sprawl across the United States—perhaps more important than zoning regulations and road building, suggests a new study by researchers at the University of Toronto. Using satellite photos, the team also found that while most cities have grown in size during the past 20 years, they remain reasonably compact, and suburban development is not as scattered as previously thought. Find more details and maps at www.diegopuga.org.

Speaking words that may warm the hearts of architects, panelists at the "Building for Baby Boomers & Beyond: 50+ Housing Symposium 2006" agreed that as baby boomers retire and move into smaller houses, they are avoiding McMansions and the cookie-cutter designs typical of suburban developments. This trend creates more opportunities to express individualism in residential architecture. Visit www.nahb.org to learn more.

Lumber giant Weyerhaeuser has consolidated five business units to create iLevel, a new platform that provides one-stop shopping for architects and builders seeking residential structural framing. Weyerhaeuser hopes that the new unit, which encompasses the Trus Joist and Structurewood lines, will streamline product delivery, make customization easier, and reduce waste. For more information, go to www.ilevel.com. *James Murdock*

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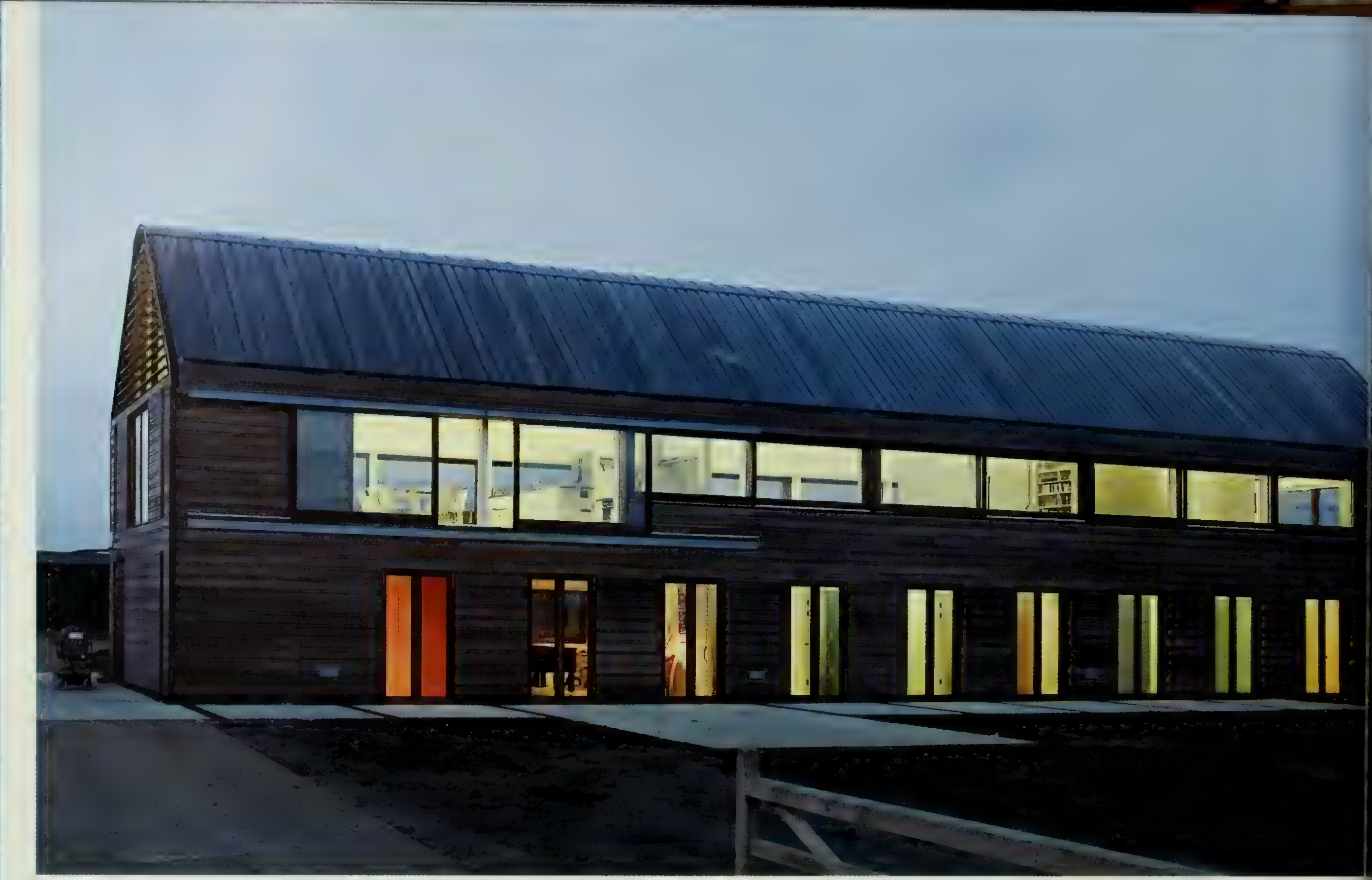
To farmers, barns serve an essential purpose, but also signify values that go beyond everyday chores. The qualities of tradition, hard work, and independence represented by barns are as much a part of the building type as their framework and roof. Over the course of centuries, various barn styles evolved in Europe and North America. Here, immigrants imported diverse designs and construction techniques, and then adapted them to conditions of climate, geography, available materials, and changes in agricultural practice in this country. Through all this change, the barn remains a powerful symbol of the past, even as it becomes endangered. Lucky for us, its form persists as an inspiration to architects. On the following pages, we present examples of barns that have been adapted for contemporary, nonagricultural use. While some are part of farm complexes, others are now in purely residential settings. All in all, the barn remains a reminder of our rural past, and a fertile source for modern interpretations. *Jane F. Kolleeny*



Knox Bhavan Architects designed **Holly Barn** to fit impeccably into the native terrain of the Broads

By Robert Such

On England's east coast lie the Norfolk Broads, a protected area of outstanding natural beauty. The Broads consist of a crisscrossed network of 117 square miles of waterways and shallow lakes. Though they appear natural, their formation resulted from centuries of peat extraction by local people, who used the material as heating fuel during medieval times. When sea levels later rose, the man-made pits flooded. Now tourists come here to visit museums, sail, walk nature trails, and observe bird life on the marshes.

A husband and wife with grown children discovered a dilapidated barn on the banks of the River Yare in the Broads. They asked London-based Knox Bhavan Architects to investigate converting it into a weekend retreat, where they could get away from the busy life of London. The barn's poor state of repair, however, meant that it could not be renovated.

The architects decided to build a barnlike house instead, one whose design recalled the wooden shiplapped buildings in the area. For the exterior, they specified hard-wearing, rot-resistant Siberian larch. "The timber," says Simon Knox, "was chosen because we thought it went very well with local windmills, boathouses, and boat construction." Suitable for a wide variety of uses, larch wood weathers to a silvery gray patina.

Robert Such writes about and photographs architecture, design, landscape architecture, and lighting for a wide range of publications.

The local authorities were inclined to grant permission to build a house with a pitched roof, like the one on the original barn. So the architects used such a roof and inserted glazed gables at its east and west ends, fitted with louvers made of the durable, tropical hardwood iroko (also known as African teak Standing-seam zinc cladding covers the ridge of the weathered larch ro The bats and owls made homeless when the old barn was torn down no take shelter in the horizontal slots of the new structure's exterior claddin

Project: *Holly Barn*
Location: *Reedham, Norfolk, England*
Owner: *Alan and Jenny Rogers*
Architect: *Knox Bhavan Architects—Mary Lou Arscott and Simon Knox, project designers; Lucy Thomas, project team*
Engineer: *Eckersley O'Callaghan*
General contractor: *Willow Builde*
Landscape: *Buckley Design Associa*

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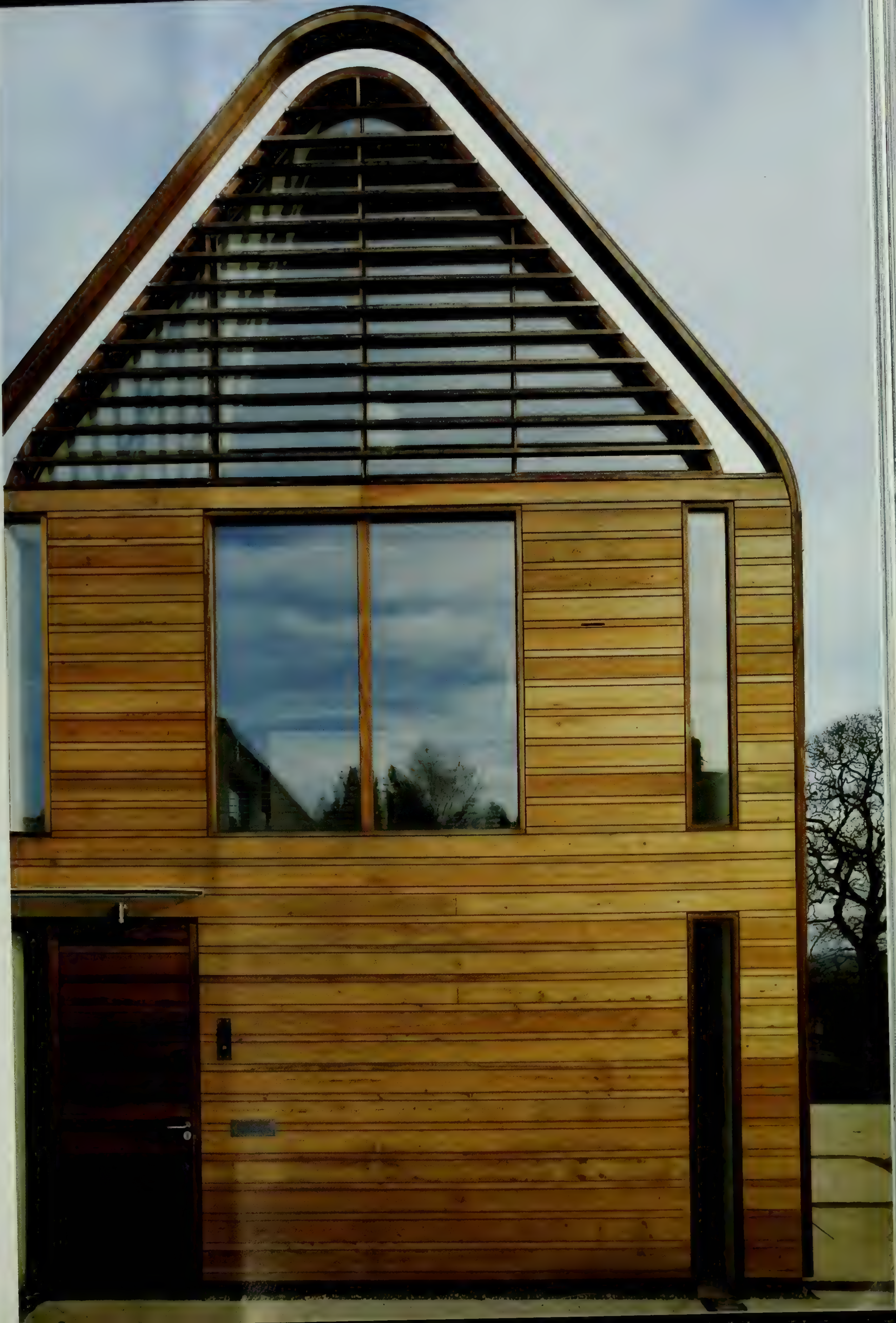
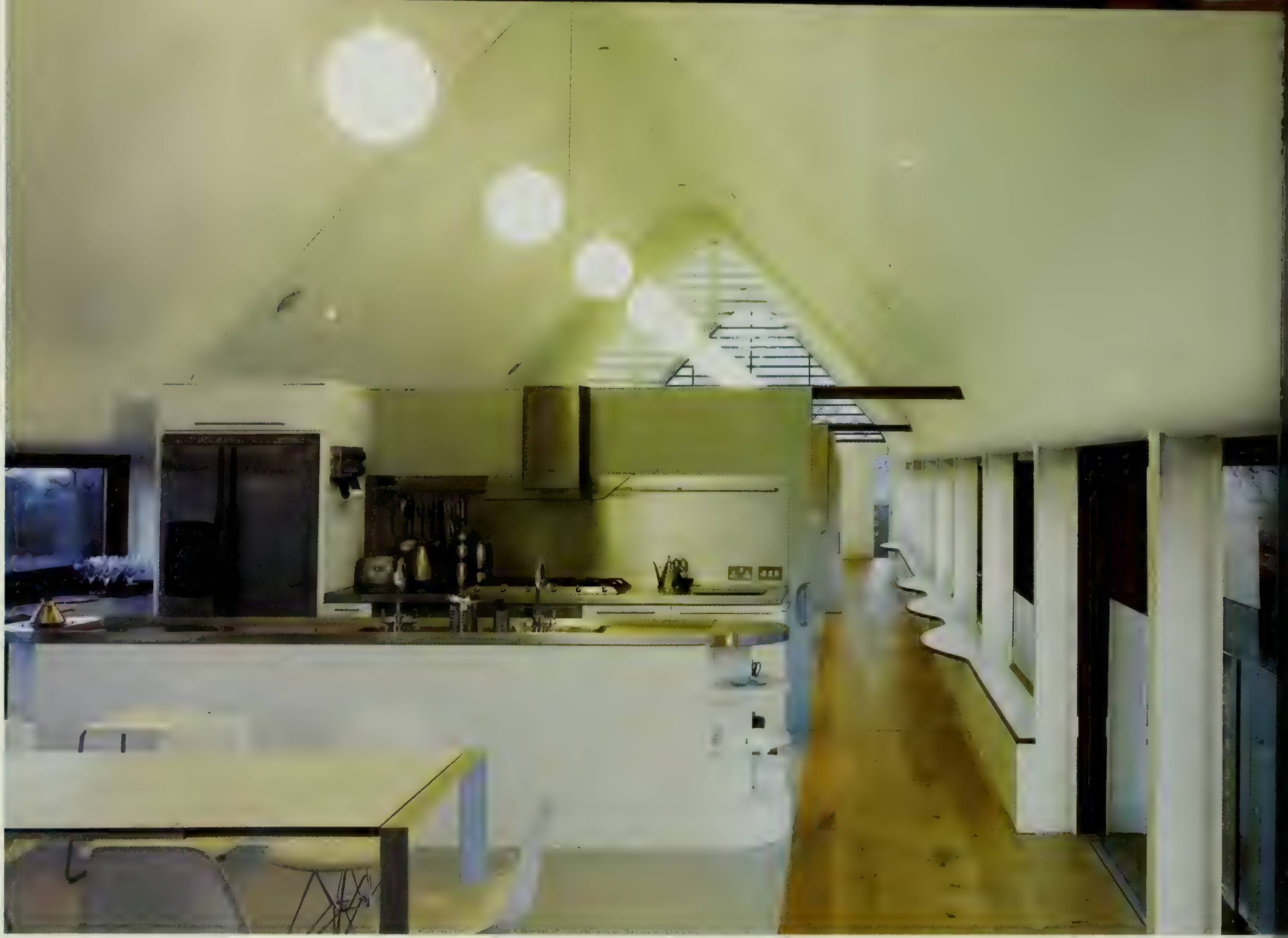
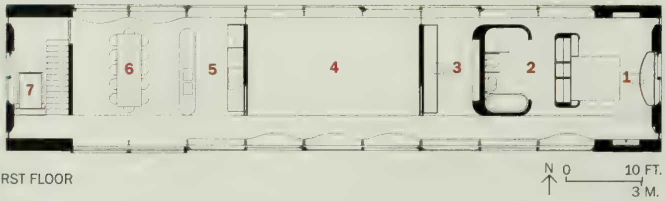
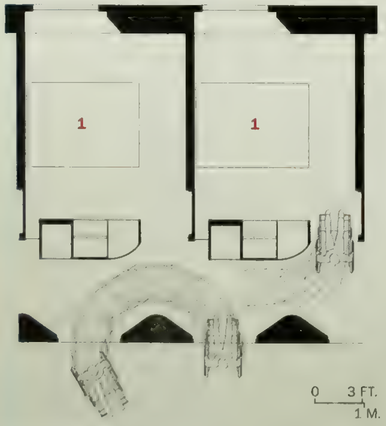




The open volumes on the second floor narrow with the pitched roofline. Curved projections in the window sills facilitate wheelchair access (above).



FIRST FLOOR



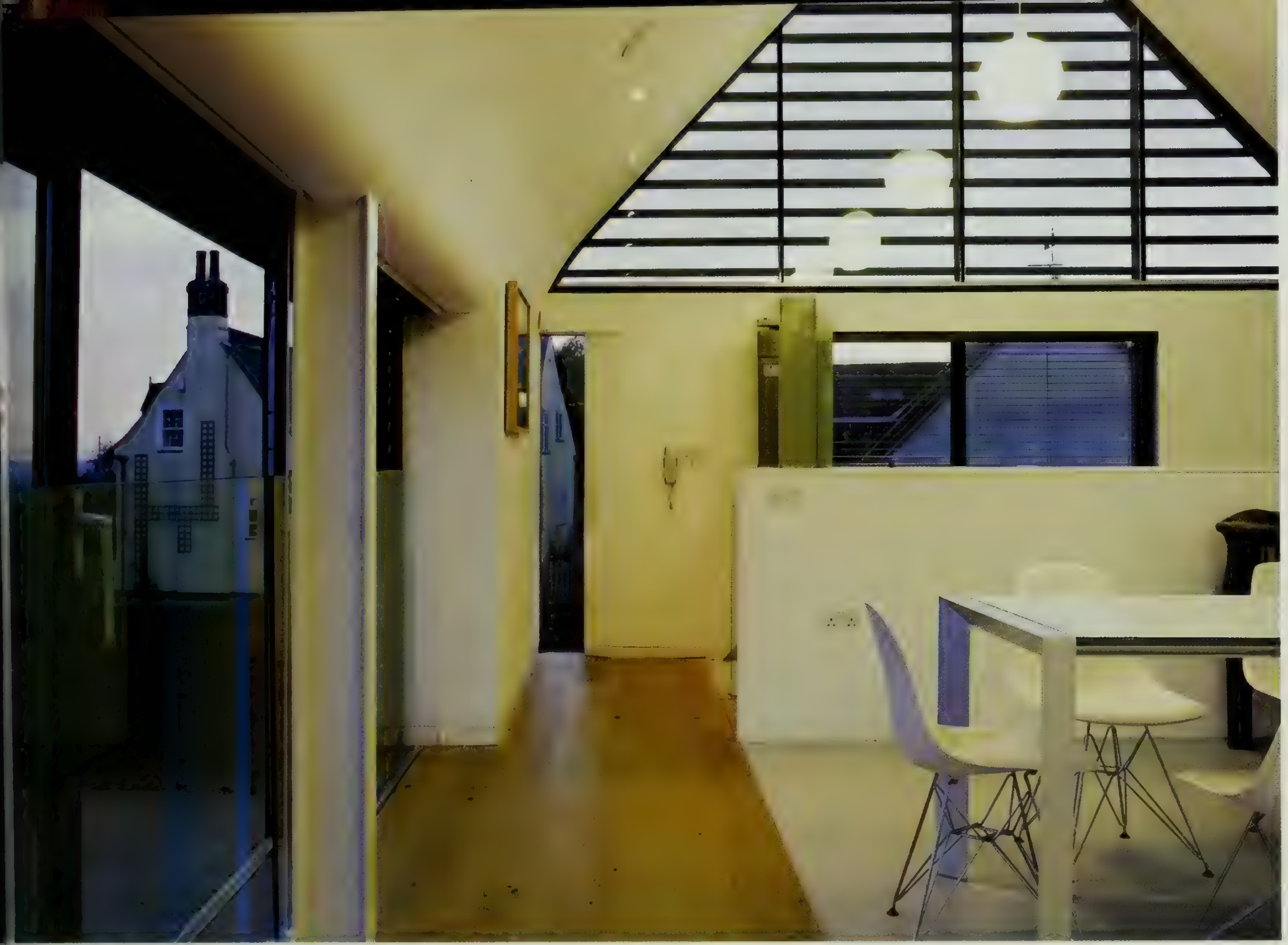
GROUND FLOOR: PARTIAL PLAN

1. *Bedroom*
2. *Bath*
3. *Study*
4. *Sitting room*
5. *Kitchen*
6. *Dining room*
7. *Elevator*

With a narrow rectilinear footprint of 1,780 square feet and total square footage of 3,229, the house's overall two-story volume closely resembles that of the demolished agricultural building. The first floor accommodates an entry hall, playroom, four small guest bedrooms, and two bathrooms. Each bedroom is 118 square feet, which is "reasonable in size but not overgenerous," says Knox. To make the rooms feel bigger, the architec treated the doors to the bedrooms as a continuation of the corridor. Durin the day, they remain open, tucked into wall recesses. The connecting hal way thus takes on a much larger scale. While floor-to-ceiling French doo on the south side bring in abundant daylight and unite the interiors wit the garden, smaller rectangular windows on the north permit light to ent but minimize heat loss in cold weather.

As the husband in the family suffers from chronic arthritis, th proportions of the rooms and hallways "have been very carefully detailed accommodate the turning circle of a wheelchair," says Knox. The walls an furniture feature rounded corners, varying in radius from 12 to 30 inche "The mobility issue is not in your face," continues Knox; the subtle curv become a design element that is carried throughout the residence, inclu ing elegant curves above the second-story windows, where the smooth sh of the plaster ceiling meets the low eaves.

A staircase and a wheelchair lift lead from the entry hall to sp cious rooms on the floor above. The upper floor contrasts significantly wi



**e glazed gables,
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ko-slated panels,
ng light into the
erior. They are visi-
from one end to
other (above).**

the first floor, with its flat ceiling, predominantly white walls, and cellular spaces. "It is open all the way to the roof, which you can see from one end to the other," says the architect. "It's uplifting to come upstairs and be in this larger volume."

Locating the principal rooms upstairs means that the owners enjoy panoramic views of the countryside. The dining/kitchen area, ing room, study, and master bedroom are separated from each other by oot-high privacy walls topped with glass that extends to the ceiling. e only fully enclosed space is a bathroom. On the south side, a 3-foot- de oak-floor hallway runs the length of the elongated space, ending in master bedroom.

Holly Barn demonstrates how sensitivity to the regional context d the needs of the disabled, combined with attention to detail and exe- tion, can create a home where fluid and sensuous spatial design clearly fills a client's practical and aesthetic requirements. ■

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urces
od cladding/shingles: *Pattrick & ompsons*
tal roofing: *Rheinzink*
od windows/doors: *Riverside nery*
zing: *East Anglia*

Cabinet/woodwork: *John's Joinery*
Rubber flooring: *Freudenberg*
Elevator: *Freeway Lift Services*

For more information on this project, go to Residential at **www.archrecord.com**.

Specht Harpman's **Modern Barn** is a comfortable space that combines the old and the new

By Jane F. Kolleeny

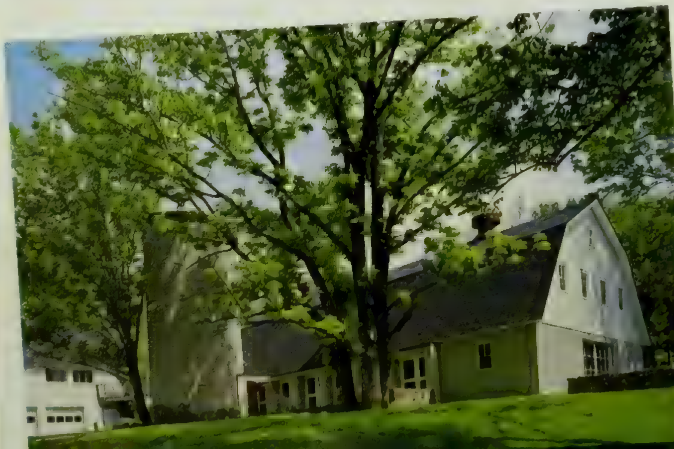
Opportunity can be cloaked in misfortune, as was the case for an artist couple from Manhattan whose country home was partially destroyed by fire. With their primary residence in New York City, they had been spending weekends in Wilton, Connecticut, for 23 years, until an electrical fire in 2001 burned their barn-turned-rural getaway down to its gambrel frame. Several ungainly additions during the 1960s and '70s had camouflaged the potential of the structure, but the fire allowed the owners to see their home as if for the first time.

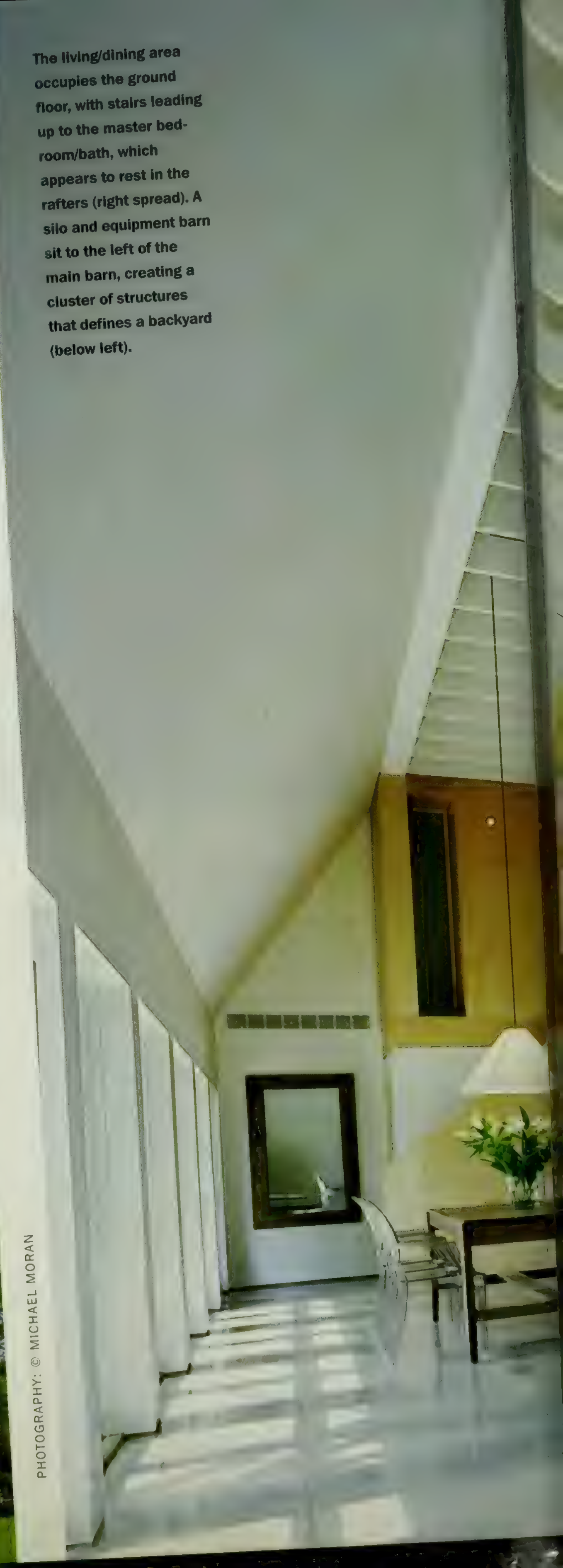
Involving the rebuilding of a 4,500-square-foot dairy barn and the partial restoration of a silo, this project fits well in a town like Wilton, which takes pride in preserving its history. With its wooded hills, winding roads, old stone walls, and tranquil ponds, Wilton is a quaint New England town, about 55 miles north of Manhattan.

Specht Harpman, based in New York City and Austin, Texas, undertook the project on this former farm, which includes two barns and a silo clustered on an 8-acre site. The 1870 complex sits comfortably on a rolling grassy site dotted with crab apple and other flowering trees.

Until the fire, the owners had lived on the upper level of the dairy barn, connected by a deck to the upper level of an adjacent storage barn, which contained an apartment for guests and workrooms for the owners' use. This unusual arrangement left the ground floors of both buildings for storage. "We appreciated the love they felt for the ad hoc and informal

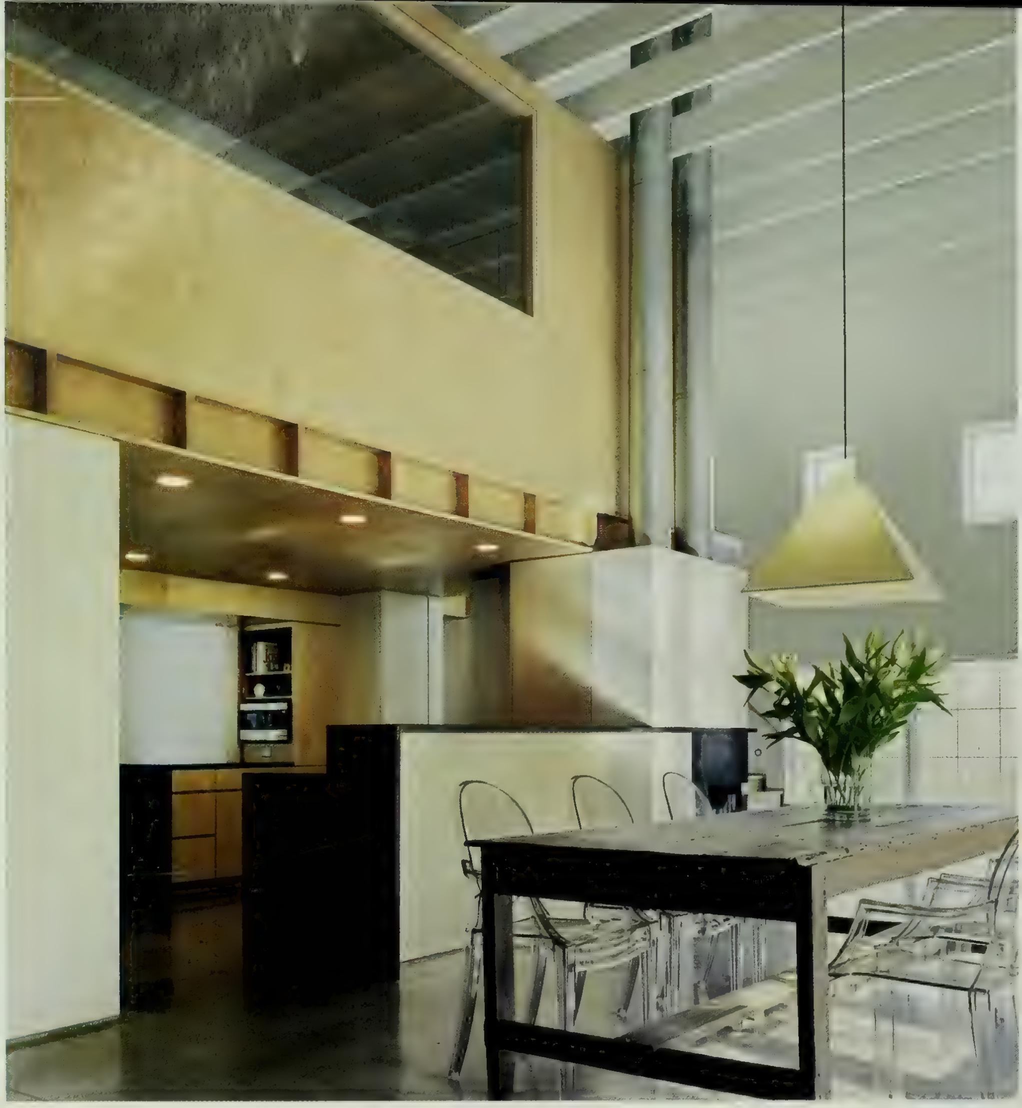
Project: *Modern Barn*
Location: *Wilton, Connecticut*
Architect: *Specht Harpman—Scott Specht, AIA, and Louise Harpman, Assoc. AIA, project designers; Courtney (Allan) Rice, project manager; Amy Lopez-Cepero, project team.*
Engineers: *Gibble Norden Champion Brown Consulting Engineers*
General contractor: *Prutting & Company Custom Builders*





The living/dining area occupies the ground floor, with stairs leading up to the master bedroom/bath, which appears to rest in the rafters (right spread). A silo and equipment barn sit to the left of the main barn, creating a cluster of structures that defines a backyard (below left).

PHOTOGRAPHY: © MICHAEL MORAN



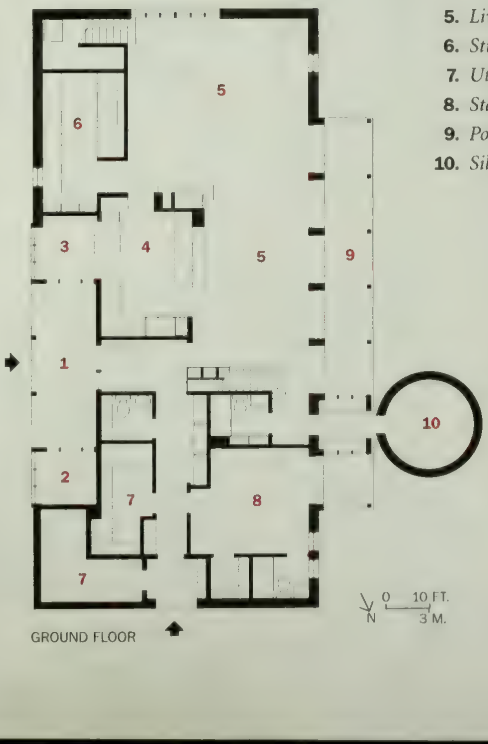
To preserve the loftlike space of the barn, the architects created an external buttress that allowed them to move the cross ties high up enough to get 16 feet of clear volume without beams. The kitchen is tucked under the upstairs bedroom, and the chimney flues thread through the cross ties to the rooftop.

arrangement of structures, roads, and paths on the property, but thought they were missing an opportunity to establish a more direct connection between their home and the gardens and fields," says Scott Specht, AIA.

Engaging the landscape, creating a new entry, and reenvisioning the main barn guided the architects as they developed their design. The house also needed to accommodate two large elderly black Labrador retrievers, very much a part of the family.

The architects resited the house in the landscape, creating an outdoor arrival area on the long east side of the barn. An informal garden court leads the visitor inside to an entry porch, flanked by a potting shed and a breakfast room. On the other long side of the barn—the garden side—four French doors join the inside to the outdoors, effectively dissolving the wall and opening it to the landscape and silo. A teak terrace/deck abuts the house and negotiates the boundary between living quarters and backyard. The wife in the couple, a former fashion designer turned landscape designer, enlivened the site with plantings, and created a secluded garden and wading pond for the dogs, between the main house and the storage barn.

The architects brought the public spaces down to the ground-floor level, making them more accessible. They took their cues from the original gambrel barn, leaving the main volume open and adding concrete exterior buttresses secured by a series of cross ties to create a loftlike space. Now air and light flood the central barn space. The living/dining



1. *Entry porch*
2. *Potting room*
3. *Breakfast room*
4. *Kitchen*
5. *Living/dining room*
6. *Study/family room*
7. *Utility*
8. *Staff bedroom*
9. *Porch*
10. *Silo*

Cedar Shake &
Shingle Bureau

Photo: Courtesy of Victor International Corporation
Architect: Alexander Bogaerts & Associates

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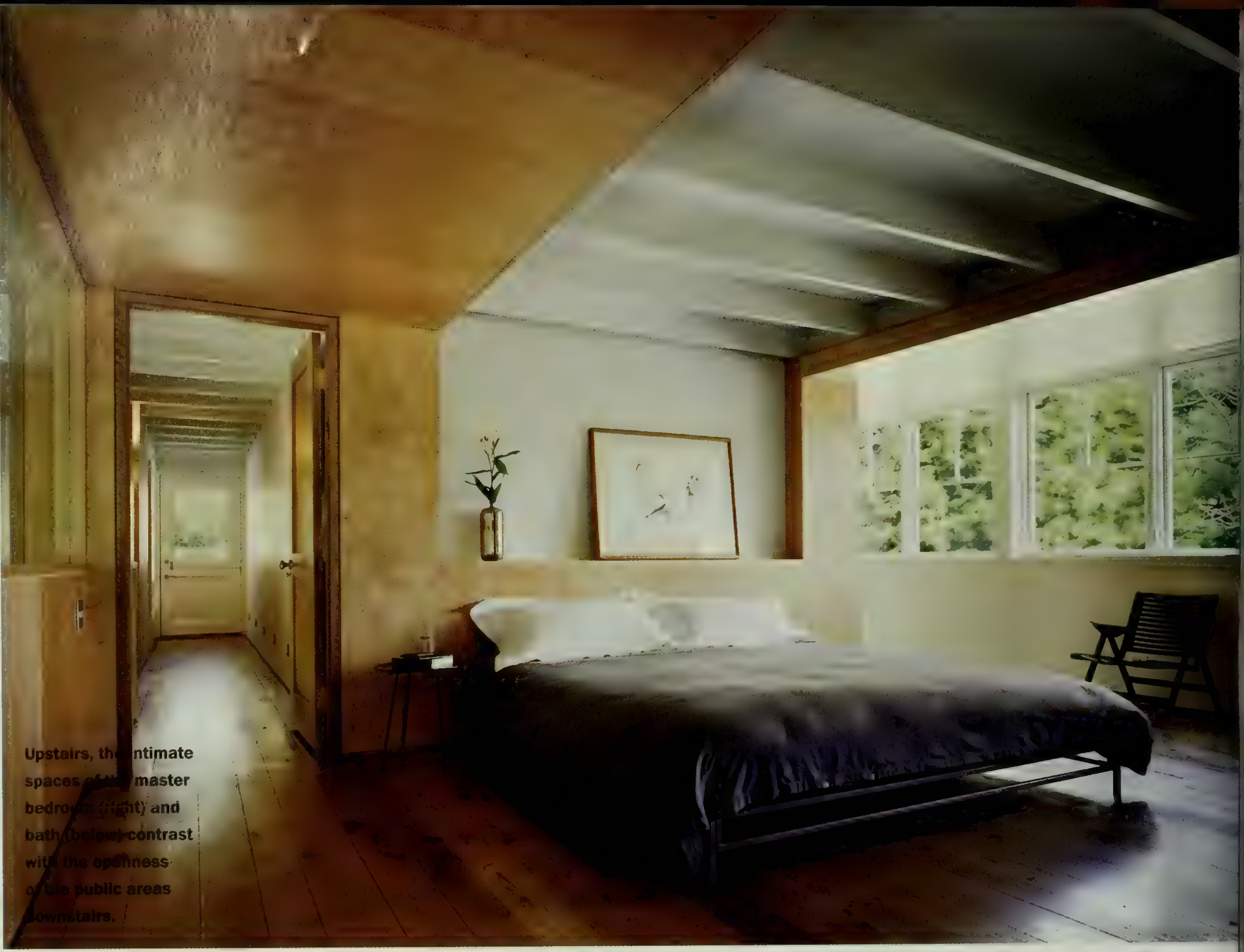

Upstairs, the intimate spaces of the master bedroom (right) and bath (below) contrast with the openness of the public areas downstairs.

area, powder room, kitchen, breakfast room, husband's study, and maid's suite occupy the ground floor, while the upper level—suspended from the rafters like a wooden box—houses the master bedroom suite, the wife's study, and a small library.

The architects balanced the large public space with intimate areas, including the studies, library, and master-bedroom suite. "In an open loft, we think it is very important to have private, tucked-away spaces that have specific uses but relate back to the main social gathering spaces," says Specht.

Interior detailing in the kitchen includes maple cabinets and honed, black-granite countertops. In the living room, a wood-burning stove supplemented by radiant heating under the concrete-block floors warm the house. Built-in cabinets, including a *tansu*, a Japanese stepped chest under a stairwell, provide storage. Throughout the house, dog-friendly stairs, covered in thick sisal matting to minimize slippage, also feature closed rails and risers for safety. Dutch doors equipped with push latches that the dogs can activate give the animals freedom of movement from indoors to out.

Crowned with the original rusty ventilators on the rooftop, th
old barn appears to welcome the modern interventions inside, includi
the warm-toned woods, stone, plaster, and concrete. "The big idea was
treat the historic barn as a spatial envelope into which a new design idio
could be played without affecting the exterior form," says Loui
Harpman, Assoc. AIA. Both rustic and up-to-date, this house feels like
gracious country cousin, with all the savvy of a big-city relative. ■

Sources

Roofing: *CertainTeed (fiberglass shingles)*

Windows: *Bonneville Wood Windows*

Plumbing: *Kohler; TOTO*

Lighting: *Zaneen; Lightolier; Belfer*

Countertops: *Nero Assoluto*

Cabinet hardware: *Lamp; Sugatsune*

Custom concrete floor: *Azzarone Contracting Corporation*

For more information on this project, go to Residential at **www.archrecord.com**.

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Shipley Architects' **Party Barn** and **Guesthouse** reveal how to live the simple life in an Old West town

By Ingrid Spencer

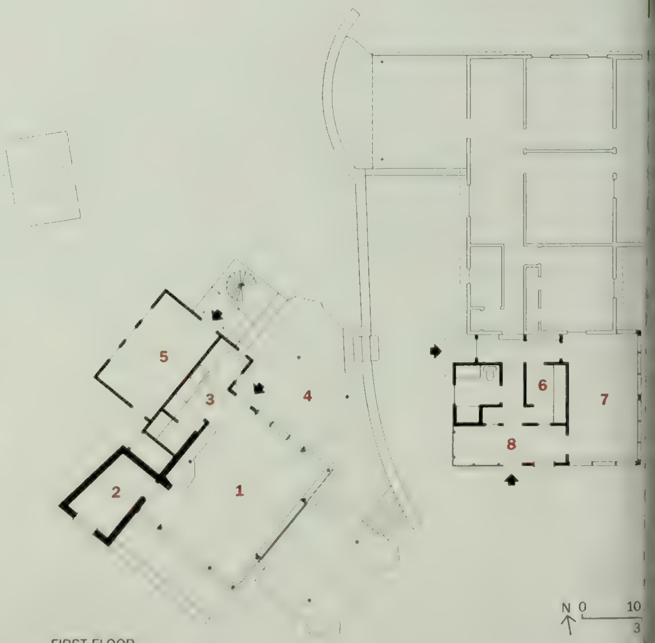
Driving through Hico, Texas, on a scenic route through the hill country from Austin to Dallas, you might get the impression that you've come upon a true relic of the Wild West. Hico (pronounced *hy*-ko) boasts a couple of town slogans—"Welcome to Hico where everybody is somebody!" and "Hico, home of cowboys and legends." You probably wouldn't guess that this old Western town has become an area where contemporary Dallas businesspeople and their families are renovating cattle ranches into second-home retreats, places to enjoy the rough land and spend time away from the stresses of city life.

For Dallasites Martin and Laurie Cox, a banker and artist, respectively, and their two teenage daughters, Hico offered a place just close enough—2 hours southwest by car—to make the trek for long weekends and vacations. The Coxes found a 156-acre property known as the Old Calloway Place and fell in love with its rocky and wild terrain and small house, orchard, silos, wells, barns, creek, and windmill. With Dallas architect Dan Shipley, the Coxes decided they could convert the property from a cattle farm into a nature preserve and compound, adding to the existing 800-square-foot, 1920s home, and erecting a new building that would modernize and complement what was already there.

"Martin and Laurie wanted something simple that wouldn't

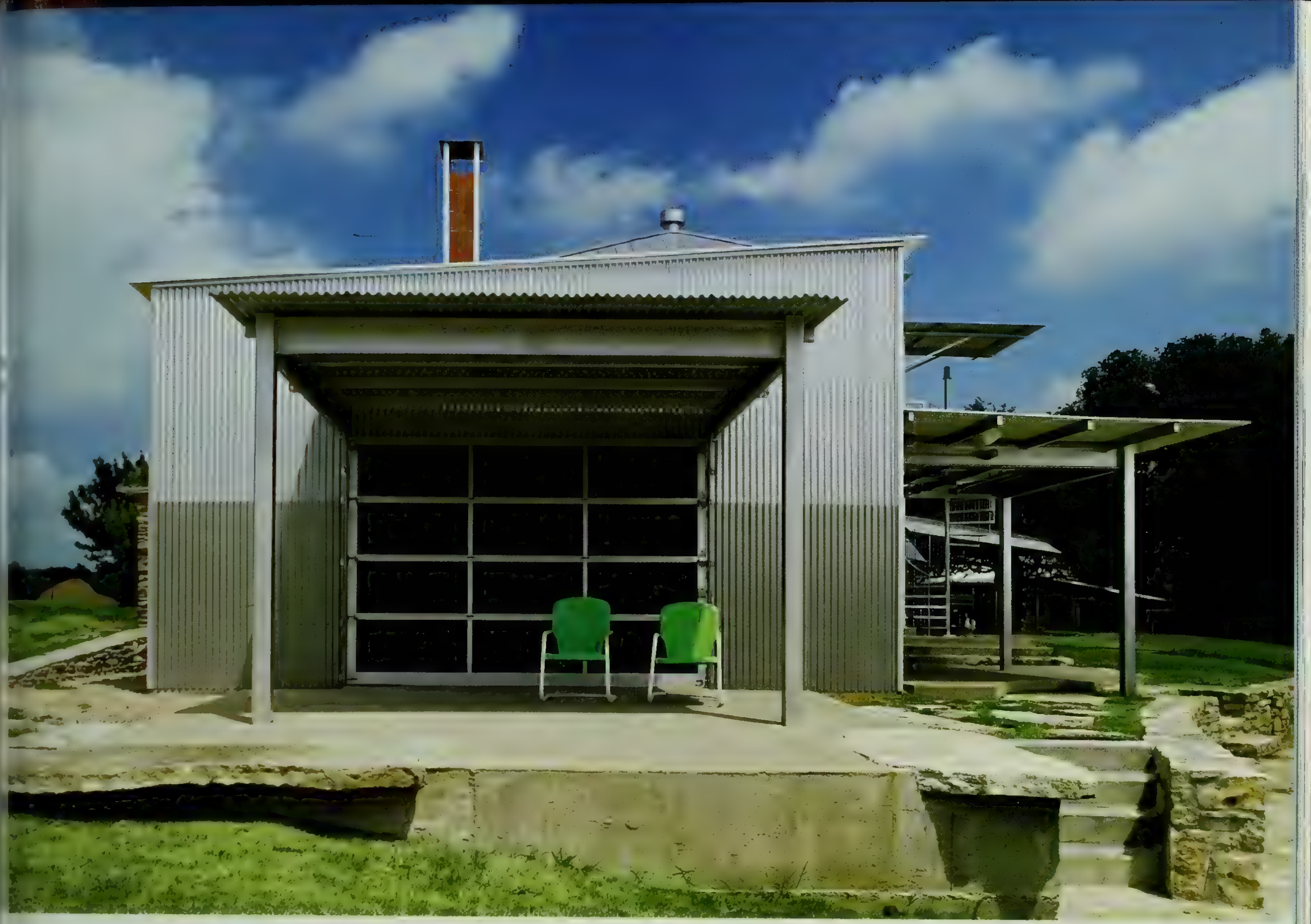
Ingrid Spencer is a contributing editor and former managing editor of RECORD. *She writes about design from her home base in Austin, Texas.*

Project: *Party Barn and Guesthouse*
Location: *Hico, Texas*
Owner: *Martin and Laurie Cox*
Architect: *Shipley Architects—Dan Shipley, FAIA*
General contractor: *Alex Moore*

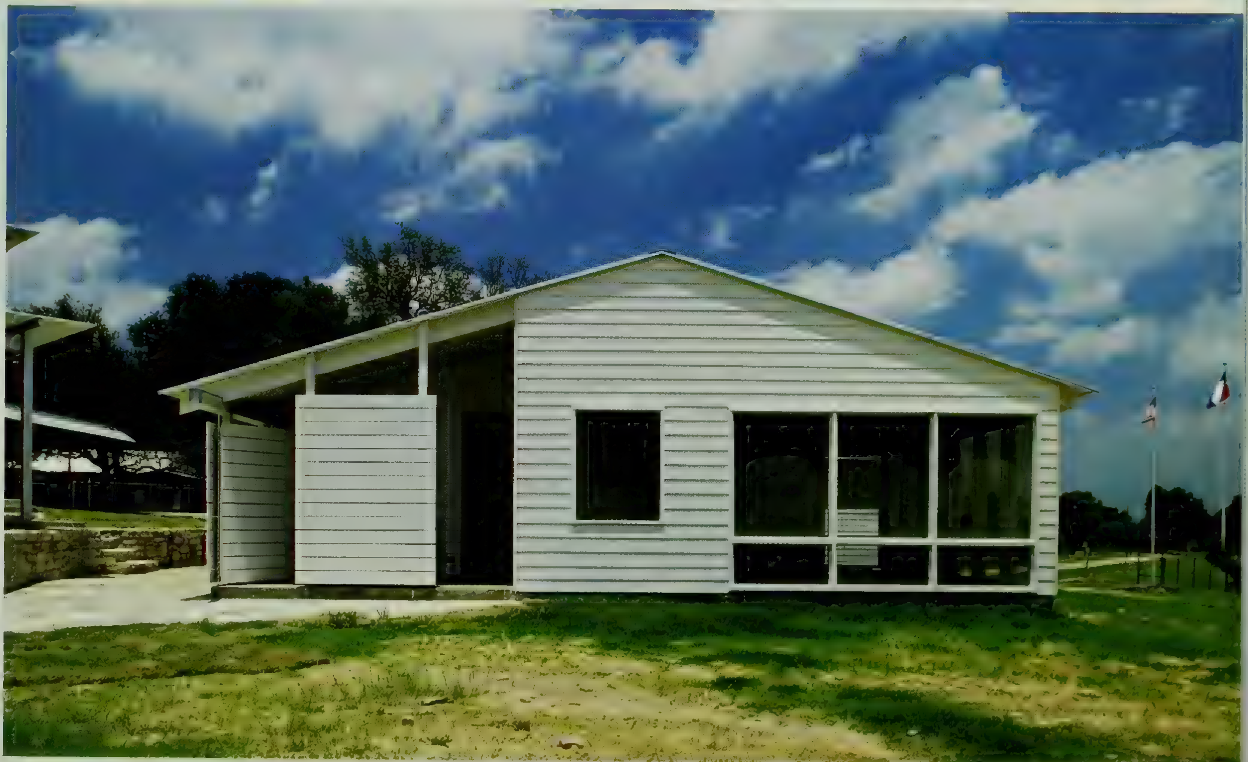


FIRST FLOOR

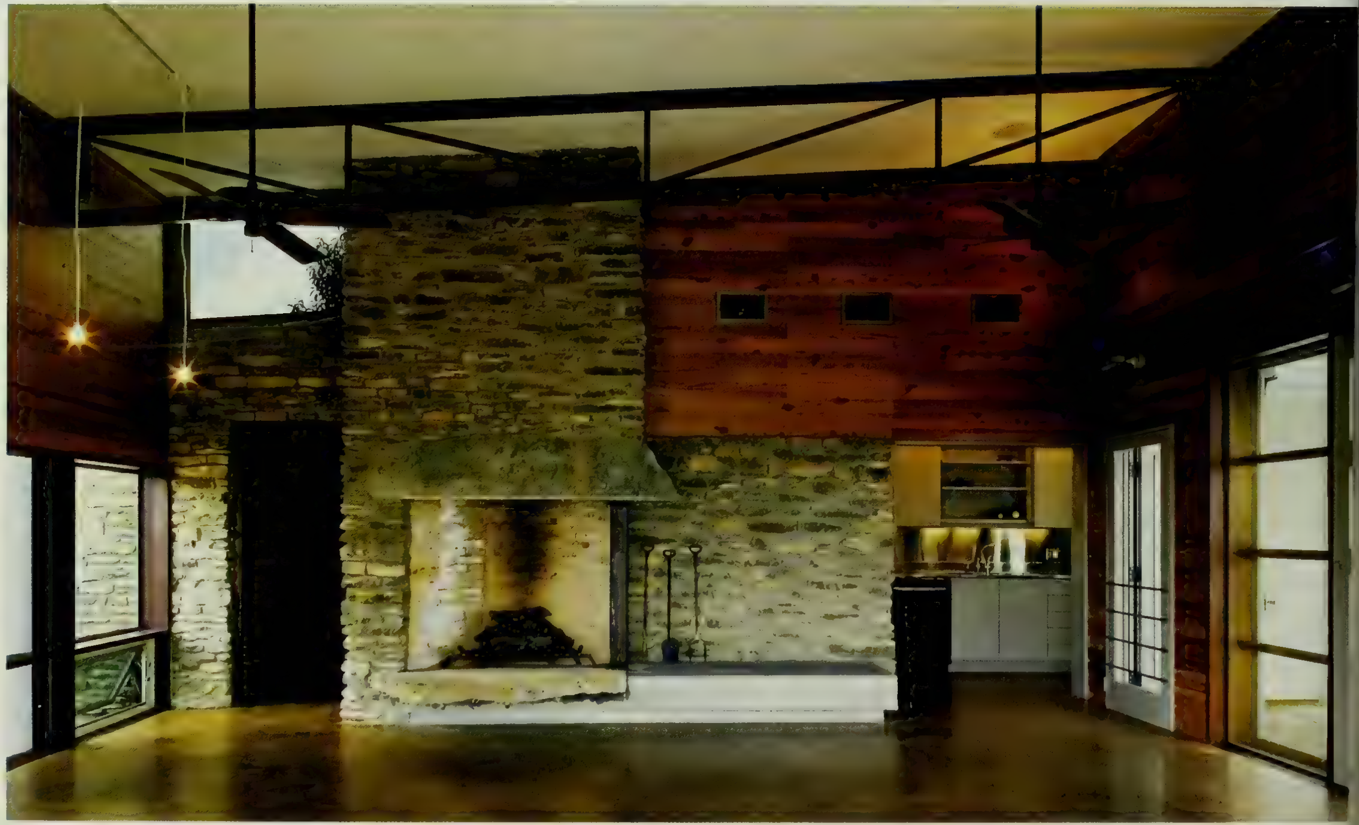
1. *Party barn*
2. *Bunk room*
3. *Kitchen*
4. *Covered porch*
5. *Bedroom*
6. *Laundry*
7. *Sleeping porch*
8. *Mud porch*



chitect retained thenticity of the tructures by modest materi- ch as corrugated ıum, to clad the barn (above), lver paint to structural-steel nts outdoors. aded patio es part of the hen the rolling, nic-shoplike are pushed up to nder the roof. The n to the existing right) mimics dates what was with fiber-cement instead of the l vinyl, and a l metal roof.



The architect layered corrugated plastic against perforated metal sheets on the lower half of the walls, allowing diffused natural light into the space (right). Interior materials include exposed structural beams, a fieldstone-clad fireplace and chimney, concrete floors, and hard-pine-plank-clad walls (below).



demean or patronize the existing house," says Shipley. The modest home, with its vinyl siding and vinyl flooring, had a kind of authenticity the Coxes appreciated. "All the elements in the original context were considered valuable and worthy," he says.

For the addition to the house, Shipley designed a 400-square-foot structure that includes a laundry room, bathroom, and screened porch. He also planned to build a freestanding guesthouse and "party barn" near a grove of large pin oak trees to the north of the existing house, but that scheme went awry when the trees contracted a disease and died. "We had planned to put the freestanding addition away from the house, giving the whole compound a motor-court kind of layout," says Shipley, "but without the trees it just didn't work. We opted instead to locate the new structure closer to the existing house but on the other side, which changed our considerations of scale and detailing—everything had to fit together as a whole."

Now sited a few steps southwest of the house, the 1,100-squar
foot guesthouse—two boxes pushed together—comprise a pair
bedrooms with bathrooms, a central kitchen, a bunkroom, and a commo
area with a stone fireplace. The shorter box, the party barn, engages the ou
doors with a pavilionlike design that can open and close. Two sides ha
glass doors that roll up to nest under the porch roof, allowing the room
open onto a patio outside and a hilly meadow beyond. Shipley clad the ext
rior of the volume in corrugated galvanized aluminum, while layering t
lower portions of the walls with clear, PVC panels and perforated, corr
gated aluminum panels. The perforated panels filter sunlight and redu
reflection at night. "Laurie wanted the room to feel warm at night, despi
the concrete floors and metal cladding," says Shipley. "The diffused lig
from the perforated panels accomplishes that without the need for windo
treatments, which would have been at odds with the whole design."

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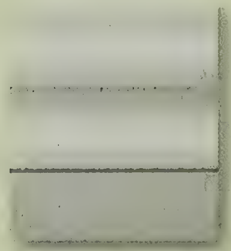

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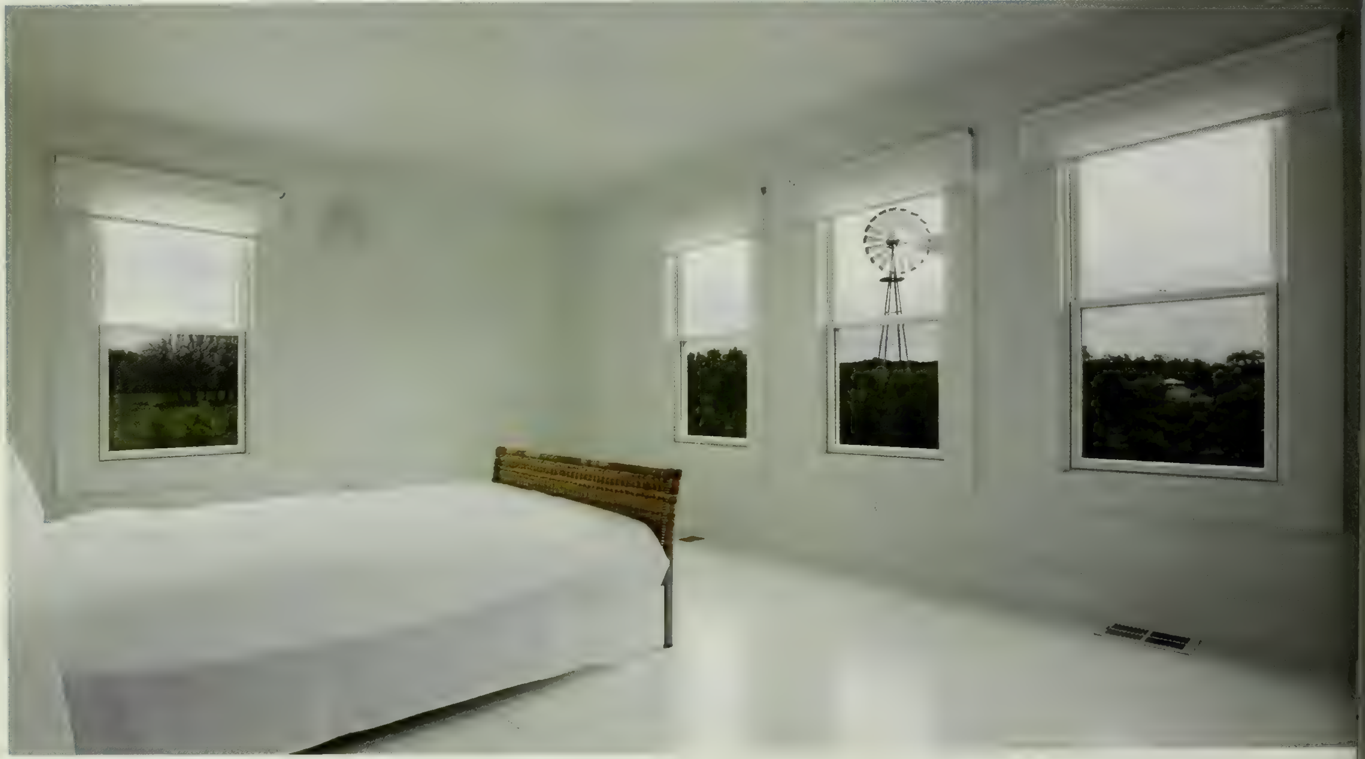
A spiral staircase leads to the second floor in the guesthouse (right), where painted wooden floors and white linen shades in the room (below) and beaded-board-clad walls in the bathroom were chosen for an old-fashioned effect, complementing the addition to the home a few steps away (far right).



Shipley also warmed things up in the barn with a fieldstone-clad Rumford fireplace. Its hearth and mantel of stones quarried from the creek on the property fit the massing of the room and harmonize with the ipe-wood-plank entry door, concrete floor, and hard-pine-plank-clad walls. The interior features ceiling fans above, gentle light from spotlights aimed upward, track lights hanging down as if on strings, a wood table that can seat about 10, comfy chairs and sofas, a kitchen that seems made for party preparations, and a little dungeonlike room at the back with stone-clad walls and steel bunk beds designed by Shipley. It's easy to imagine a large gathering, including lots of kids, enjoying this space.

Fiber-cement siding painted white and detailed to refer to the original house covers the second box, a two-story rectangle containing two guest rooms and a bathroom. Upstairs, interior floors are clad with white-painted pine planks, giving the room a sweeter, more old-fashioned feel than the barn.

The result is functionally designed spaces that are simple, attrac tive, and comfortable. While some elements might seem out of place—suc as the faux-cultured-marble panels in the upstairs guesthouse shower—i context, everything works, and by its juxtaposition creates a modest y graceful compound that is surely a welcome family escape. ■

Sources

Metal/glass curtain wall: *Alpro; H+F Plastics*

Siding: *James Hardie Building*

Metal roofing: *Galvalume*

Windows, entrances: *Pella*

Metal roofing: *Galvalume*

Locksets: *Schlage*

Paint: *Benjamin Moore*

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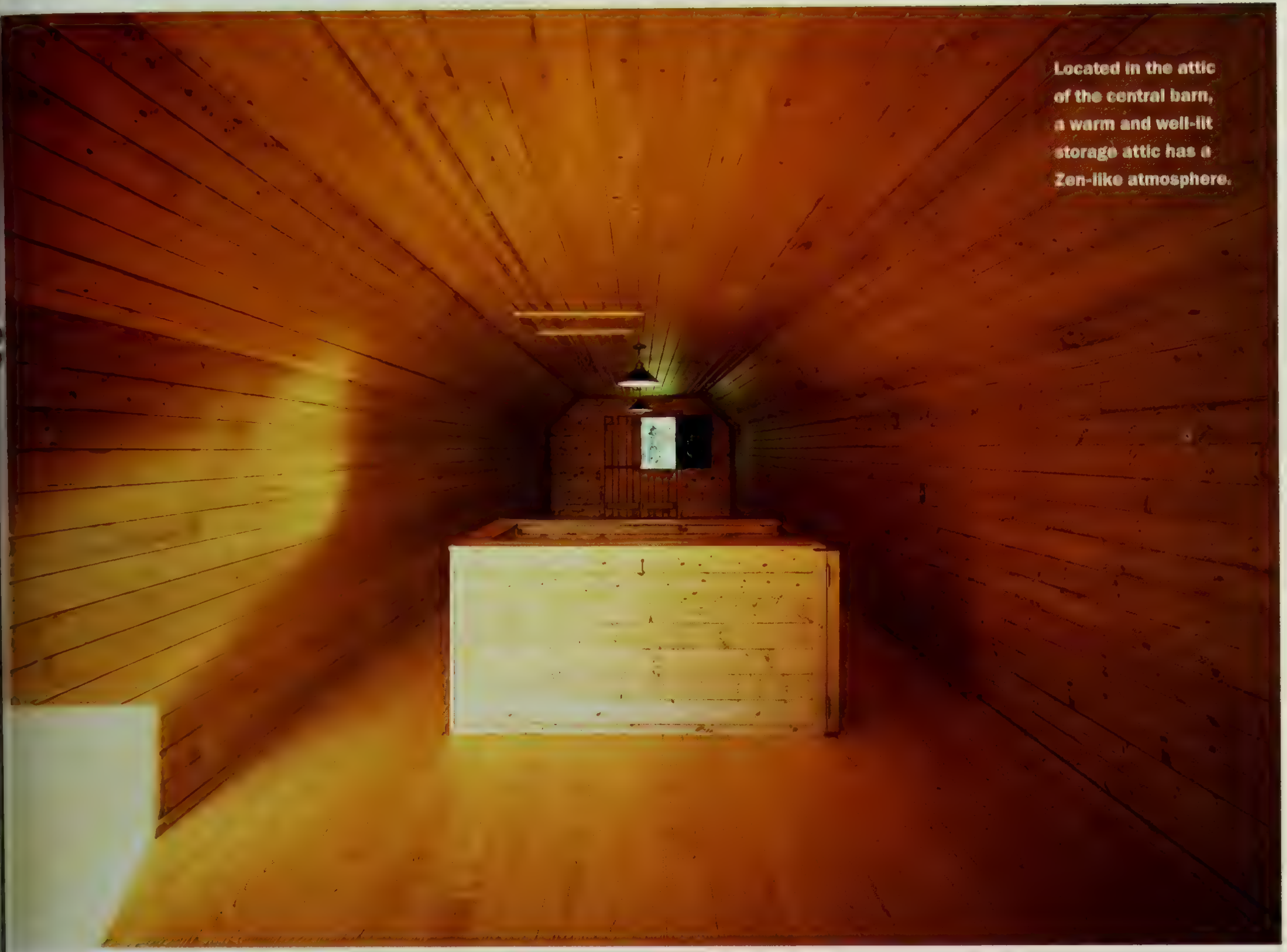


Located in the attic of the central barn, a warm and well-lit storage attic has a Zen-like atmosphere.

Vith these **Storage Barns,** Albertsson Hansen rchitecture brings new life to a ubiquitous structure

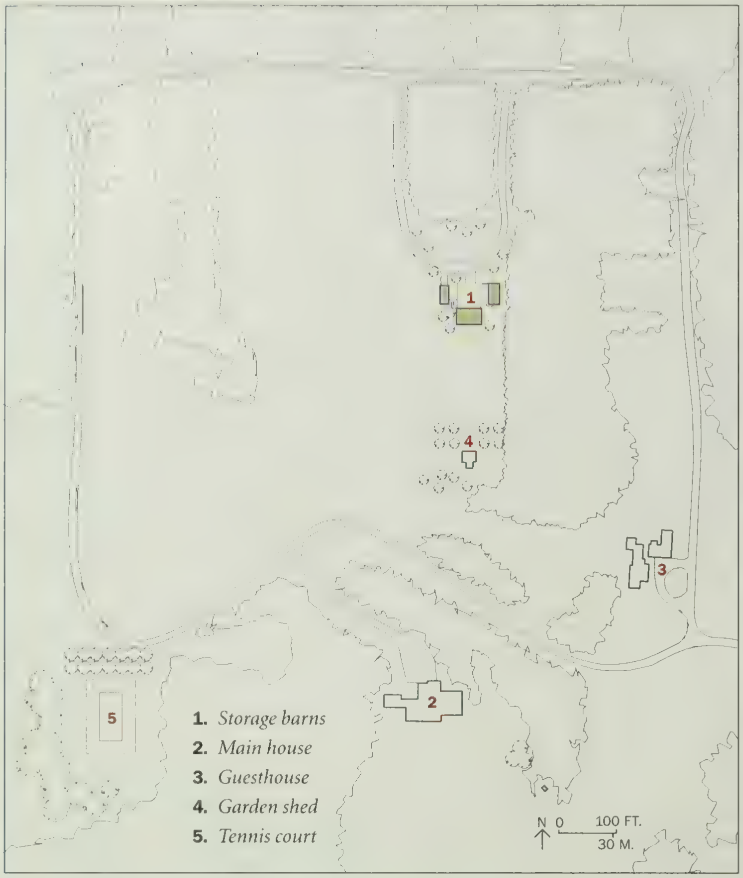
Thomas Fisher, Assoc. AIA

Why do people seem more willing to invest in vehicles than in the buildings that enclose them, especially since buildings can increase in value as fast as vehicles lose theirs? It may be because, as the social critic Ivan Illich argued, vehi- s now rule our lives, turning us all into "habitual passengers," with peed-stunned imaginations." But this barn-and-garage complex, signed by Christine Albertsson, AIA, of the Minneapolis firm of bertsson Hansen Architecture, suggests something else. The complex's ality and sense of place make us wonder if the lack of investment in this ilding type stems from so many stand-alone garages being too much e the vehicles they house—anonymous objects in space.

That these buildings avoid such a fate results in part from an enlightened local building code. Albertsson recalls how her clients, for whom she had done a few residential projects to everyone's satisfaction, "came to the first meeting with a drawing of a big H-shaped plan." It was efficient, but out of scale. Fortunately, the local municipality prohibited utility structures of more than 2,000 square feet, which led Albertsson to break the project into three separate buildings, placed around a court, creating a surprisingly urban space in its bucolic setting at the edge of a meadow, next to woodland.

Each of the three buildings serves a separate function and embodies a distinct identity. The visitor arrives at the complex down a gravel road, going around a group of trees to what appears to be a small village. A one-story barn for tractor attachments and smaller vehicles stands to the left and features overhead doors that provide easy access.

omas Fisher, previously the editorial director of Progressive Architecture *gazine, is dean of the College of Design at the University of Minnesota.*



The project consists of a three-building, 2,000-square-foot maintenance facility on a 250-acre private estate (above). The wood-lined workshop offers a comfortable interior space (opposite, bottom). Tractors are stored downstairs in one of the barns (opposite, top).

Straight ahead sits a barn to store tractors and trucks, with a finished attic under its gable roof. To the right, another barnlike structure serves as a car garage and workshop, with rear windows that look out across the rolling landscape.

Certain common architectural elements—such as stone foundations, vertical and horizontal wood siding, and metal-clad gable and shed roofs—bind the three buildings together. Yet each building also has its own, slightly quirky character, with asymmetrical compositions of wood windows and doors. "I always try to create variety as well as order and logic in a building," says Albertsson, "playing with elements and proportions, while achieving a clarity of form."

PERHAPS OUR LACK OF INTEREST IN THIS BUILDING TYPE STEMS FROM GARAGES RESEMBLING THE VEHICLES THEY HOUSE—ANONYMOUS OBJECTS IN SPACE.

The interiors of the three buildings show a similar variety. The two barns have high ceilings and exposed wood structural systems, while the garage has wood-lined walls, a composting toilet, and cabinetry in the workshop that creates a comfortable, human scale. The warmest space of all sits above the central barn: This storage attic with light at both ends creates a Zen-like atmosphere. Albertsson recalls the many hours she spent as a child in the attic of her parents' house: "An attic should be a clean, dry, finished space to explore," she says. This is one not just to explore, but to stay in.

These barns and garage galvanize our attention not only because of the care that Albertsson has taken with them, but also becaus such buildings remain largely absent from the architectural canon. Tha absence is ironic, given how much automobiles have dominated our landscape and tractors have plowed it under. Nevertheless, it seems odd tha our discipline has largely ignored the enclosures that contain the vehicle that have become some of the most important icons of our culture.

Rather than dismiss this building type, we might heed the word of Ivan Illich, who observed that "to gather ... means to be brough together by vehicles." These structures show just how much vehicles ca gather us, while creating a sense of place and revealing the garage's rea architectural potential. ■

Project: *Storage Barns*
Location: *East of Minneapolis/St. Paul*
Architect: *Albertsson Hansen Architecture—Christine Albertsson, AIA, project architect; Sonya Carel, Assoc. AIA, project team*
Engineers: *Mattson Macdonald Young*
Landscape architecture: *Close Landscape Architecture*
General contractor: *R. Hagstrom Builder*

Sources
Masonry exterior cladding: *Hedberg Aggregates*
Metal roofing: *Copper Sales*
Windows: *Pella*
Wood doors: *Custom Millwork*
Garage doors: *Designer Doors*
Locksets: *Twin City Hardware*
Door knobs: *Craftsmen Hardware*
Cabinets: *Woodland Cabinetry*
Paneling/trim work: *Custom Millwor*
Paint: *Hirshfield's*
Concrete floors/foundation: *Greystone Masonry*
Wood flooring: *Dahl Wood Flooring*
Interior lighting: *Kichler Lighting*

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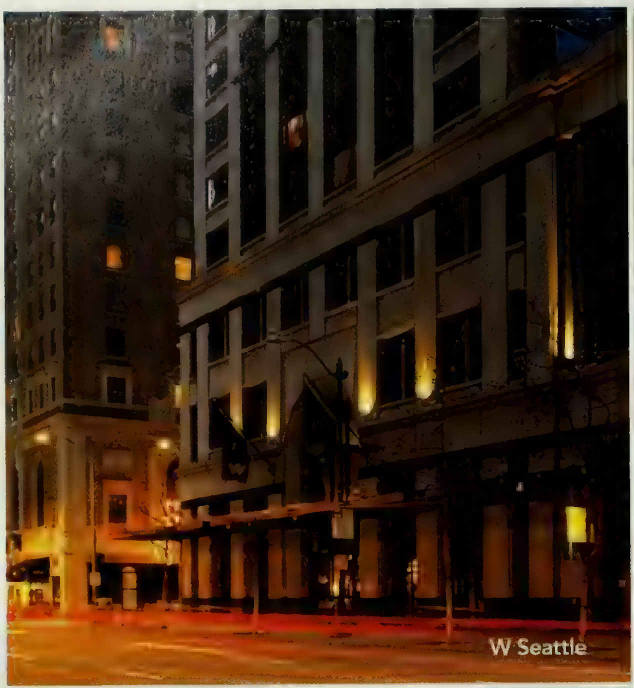

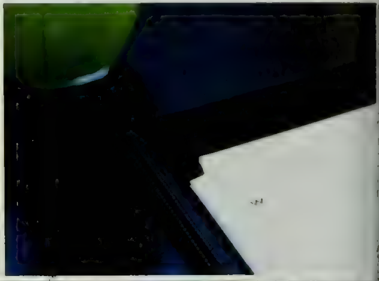

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Kitchen & Bath Portfolio

Our annual roundup features kitchens and baths that skillfully make the most of the space available. Many of the rooms **frame surrounding views,** whether it's the Marin Hills, a Japanese garden, or even the flowing water of the Columbia River a few feet below. *Rita Catinella Orrell*

wo bathrooms in a Santa Monica home take advantage of garden views and natural light

ocated in Santa Monica, the Erlich esidence was designed by John riedman Alice Kimm Architects for alifornia entrepreneur Craig Erlich nd Christine Lo, a former member of ong Kong's legislative council.

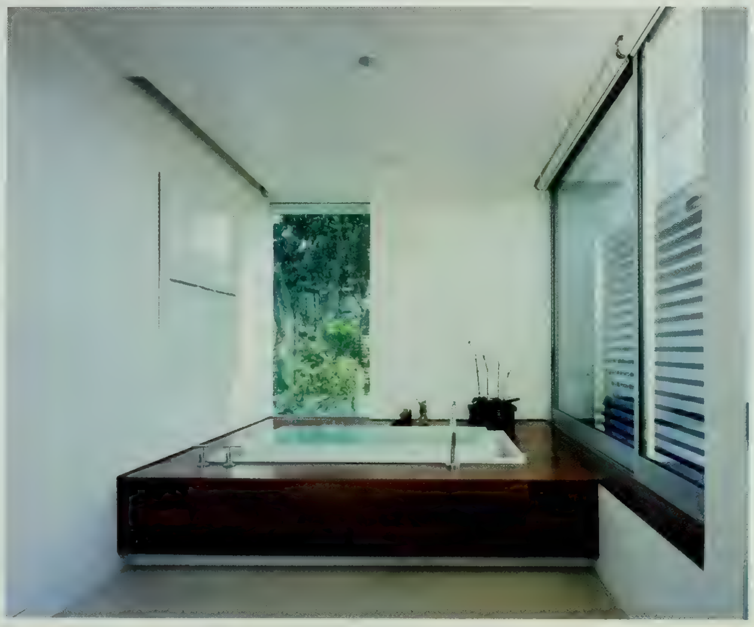
Lo is a current board member of e Rocky Mountain Institute, so her ackground in environmental issues ade a sustainable design top prior- . The architects met this goal in any ways, such as designing plenty operable windows and doors to let breezes and eliminate the need for -conditioning.

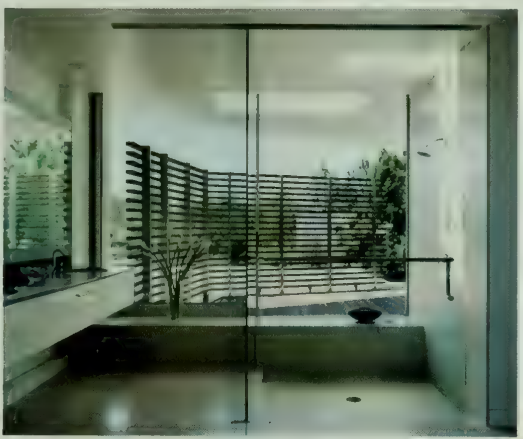
The home's master bathroom erlooks a busy street and gets the st south light in the house. "The aster bathroom is a good example where we bring in light from as any orientations as possible. The ht is always shifting and changing," ys John Friedman, AIA.

As Erlich had been living in a amped Hong Kong apartment for any years, it was important the me have an open feel, with garden ws. In the master bathroom, a ding door opens up the room to a race that accommodates a small rden and looks down on a popular ging strip. A wooden slatted screen ers additional privacy to the area d "gives another layer to the house elf," says Friedman.

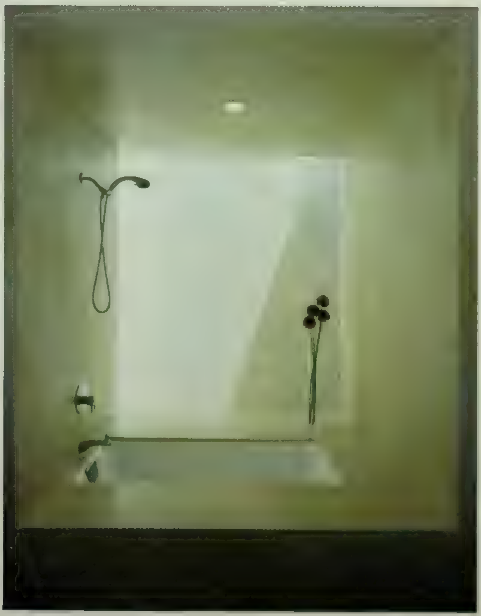
The bathroom's infinity-style aking tub is surrounded by a oba wood platform. A screen on outside of the window near the matches the one on the terrace. roughout the house we used at I call a 'reduced palette,'" says edman, including Jatoba wood, gineered stone, and limestone.

That palette, as well as the uti- tion of natural light, extends to the st bathroom. Friedman tells the ry of a tour he gave to a friend of the owner who was a priest. They paused in front of the tub area, which is surrounded by a "limestone tunnel" leading to a wall washed in natural light from above. "He turned to me and asked, 'So have you seen the cathedral?'" The reference was to Rafael Moneo's Cathedral of Our Lady of the Angels, in Los Angeles. The allusion to Mineo's style was no accident—he taught both Friedman and partner and wife Alice Kimm, AIA, at Harvard. And like a church, this home's bathrooms create many opportunities for peaceful meditation. *R.C.O.*





The master bath's soaking tub is enclosed in a Jatoba wood platform (above); the shower leads to a private terrace (left). A wall behind the guest bathroom's "limestone tunnel" (below) glows with natural light.



Architect: *John Friedman Alice Kimm Architects*
General contractor: *Anthony Bonomo, Bonomo Construction*
Sources: *Master bath—Kohler (tub, faucets, sinks); Mario Jimenez (Jatoba woodwork); Walker Zanger (limestone); Gnutti Sebastiano (showerhead, controls); Guest bath—Kohler (tub); Grohe (hand shower, control valve, tub spout); Walker Zanger (limestone)*

Hole in the bathroom floor recalls waterfront building's past

Architects Lisa Chadbourne and Daren Doss, AIA, were a little concerned that guests might be reluctant to use the new lavatory they designed for Alderbrook Station, a historic waterfront property they own in Astoria, Oregon. Their apprehension was not unfounded. In the bathroom's floor, roughly 1½ feet in front of the toilet, they inserted a glazed hatch that provides views directly into the Columbia River flowing a few feet beneath it.

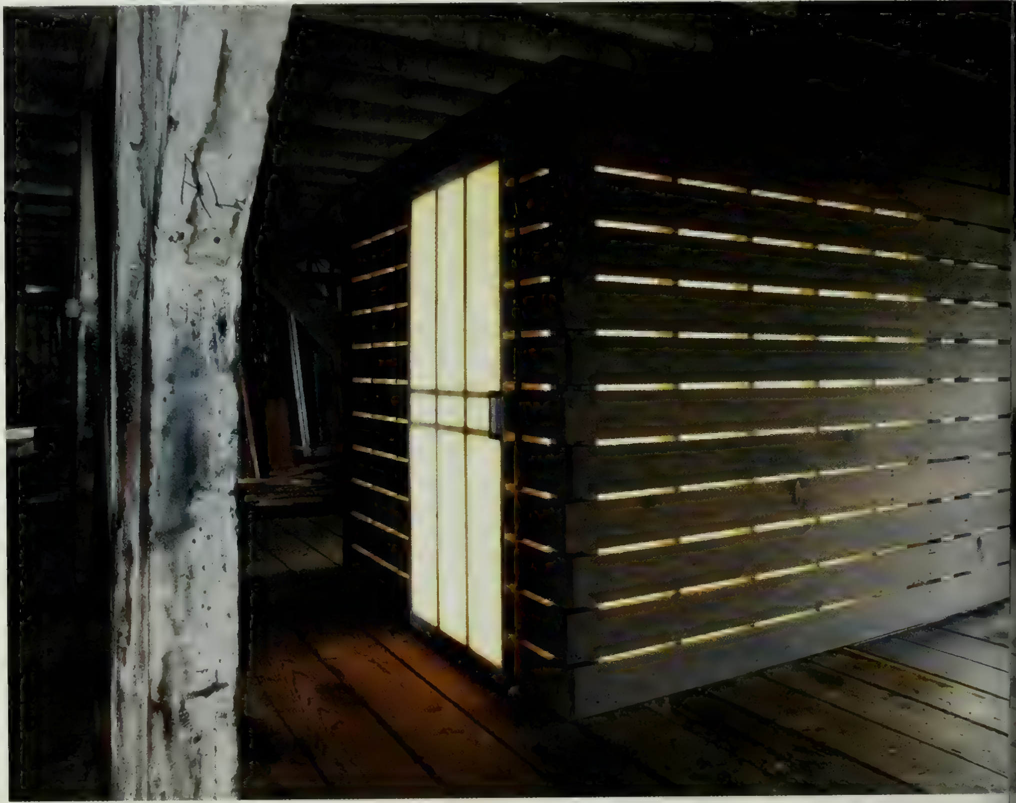
But the architects, who are husband and wife, needn't have worried. As it happens, even modest guests admit they are entranced by the play of sunlight as it bounces off the river and reflects on aluminum plating that covers the bathroom's floor and back wall. "When light dances on all of the surfaces, it's like watching a movie. It's amazing," Chadbourne says. At night, Doss adds, guests are sometimes treated to the sight of salmon, sturgeon, and other fish attracted to the hatch by the lighting.

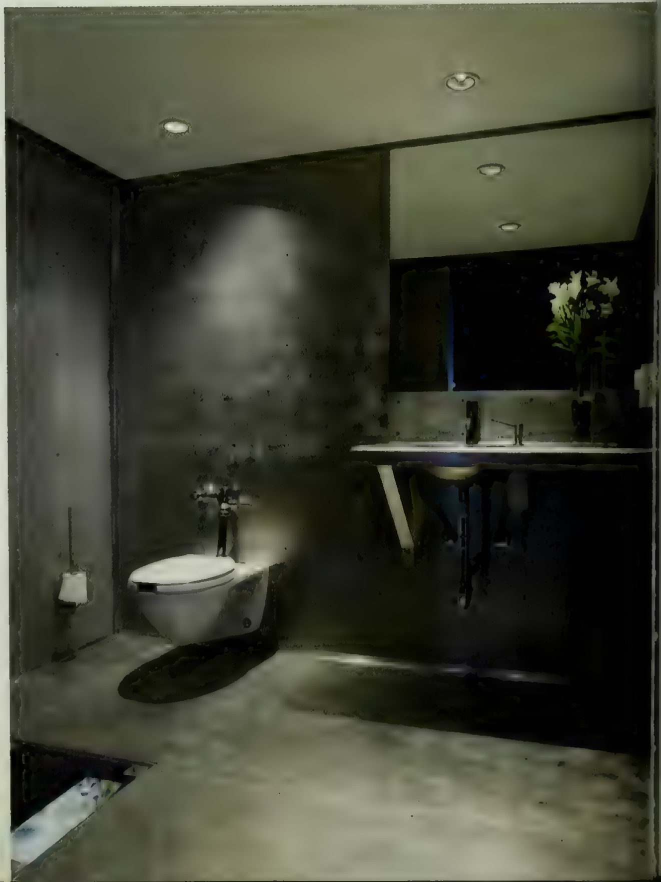
This intimate connection to nature is the appeal of Alderbrook Station. Built in 1903, and now listed on the National Register of Historic Places, the property consists of a residence and a studio, as well as a 15,000-square-foot warehouse that sits on piles in the river. Fishermen once stored their nets and gear in the warehouse; the architects now use the space to host art exhibitions and large social functions.

Chadbourne and Doss took three years to design and build a bathroom for the warehouse because they wanted to get it just right. Ultimately, they inserted an 8-foot-by-8-foot cube, clad by widely spaced wooden boards recycled from elsewhere on the property and backed with translucent acrylic panels—a scheme that allows light to pass through in much the same way it filters through gaps between planks on the warehouse's floor and walls. The hole in the bathroom's floor, Doss explains, recalls hatches that fishermen used to haul nets between floors—and it reinforces the building's context. "The bathroom is all about being over the water and watching it." *James Murdock*

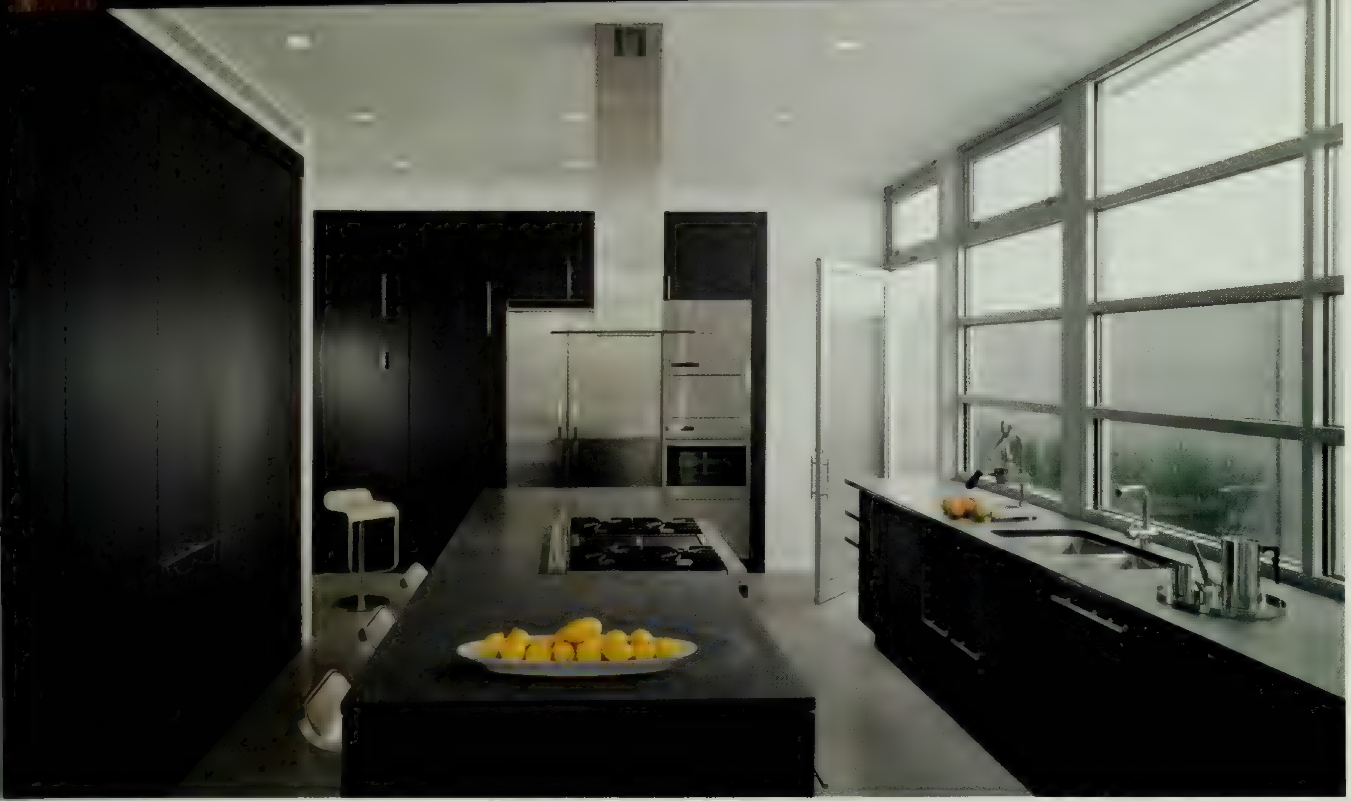
Architect: *chadbourne+doss architects*

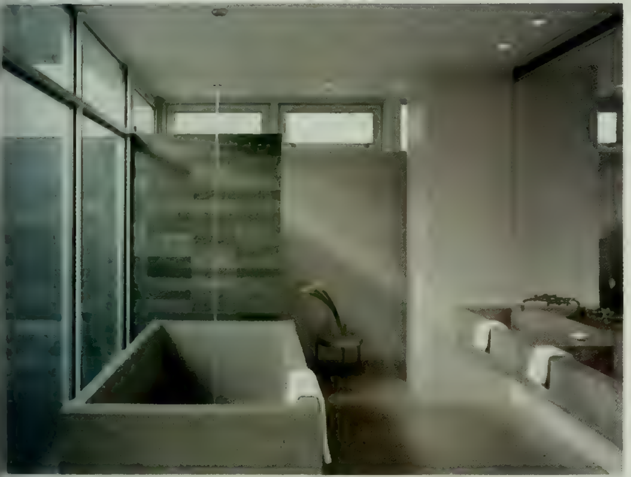
Sources: *Aluminum plate (flooring); Douglas fir planks recycled from elsewhere on the property (exterior wall paneling); LUMAsite (interior wall paneling); Halo (lighting); C.R. Laurence (door track); Toto (toilet); Whitehouse (faucet); SETS Systems (electric tankless water heater)*

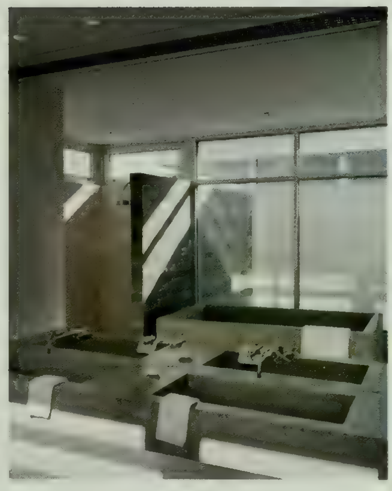




Light filters through translucent acrylic paneling and wooden boards, echoing the bathroom's historic context (above). A hole in the floor allows views into the Columbia River flowing directly beneath (right).







Exemplifying the openness of the house, the kitchen (above) seamlessly joins the dining area and the patio/pool area outside. It also reflects the house's color palette and Minimalism with its streamlined, stained-ash cabinetry. Matlock brought the outdoors into the bathroom by giving the tub (far left) and the sink area (near left) exposure to natural light and views outside. The tub and sinks are made of the same cast concrete.

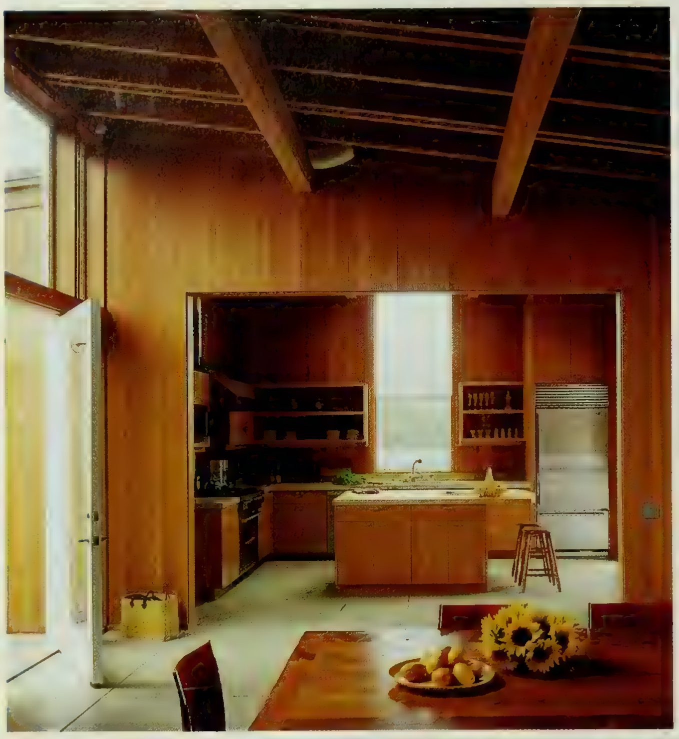
glass house in upstate New York opens both kitchen and bath to the outdoors

uild Now" may be the tagline for idrey Matlock Architects, but the n chose a different slogan for the estenberger O'Neill Residence. penness was the mantra of this oject," says Audrey Matlock, AIA.

Indeed, the house in upstate w York uses glass walls and a utral palette to create a spacious, wing residence that seamlessly egrates inside and out. Nowhere this spirit better expressed than in e master bedroom and bath areas. ass windows offer the bedroom scenic views, while the bathroom's tub and sink areas are also left open to the vista. To create some sense of privacy, a low slate wall that encloses a courtyard just outside the bedroom shelters the bath area and extends inside to create the shower stall. Made of cast concrete, a large soaking tub (filled from a spout in the ceiling) mediates between the bedroom and the bathroom area. The same concrete forms twin sinks, above which a mirror reflects the view outdoors, adding to the natural light.

Likewise, the kitchen connects to the dining room and the outdoor patio beyond. While the clients originally wanted the kitchen to be closed off, they were eventually convinced that separating the kitchen would disrupt the flow of the entire house. Full-height stained-ash cabinetry eliminates clutter and allows for abundant storage without any intrusion on the house's organization, while the kitchen's central island is on axis with the dining table and pool beyond. It's this precise level of detail that lends a classic quality to the house and suggests that Matlock's tagline could just as easily be, "Build for Always." *Diana Lind*

Architect: *Audrey Matlock Architect*
Contractor: *CM Company*
Sources: *Bathroom—Efco (windows); Get Real (concrete sinks and bathtub): Dornbracht (faucets); Bisazza (tile); Bega (lighting); Kitchen—Efco (windows); Viking (cooktop, refrigerator); Miele (hood, oven, dishwasher)*



A San Francisco beach house, and its indoor/outdoor kitchen, rise from the ashes

Several years ago, a fire destroyed the weekend house of a San Francisco family on Stinson Beach, in the shadow of Mount Tamalpais, just north of the Golden Gate. The house had been designed by William Wurster, one of the chief proponents of the Bay Area style—and Wurster's own beach house was next door. The family loved both the house and the site and hired Turnbull Griffin Haesloop to create an entirely new home inspired by the old while meeting all current seismic codes and FEMA requirements.

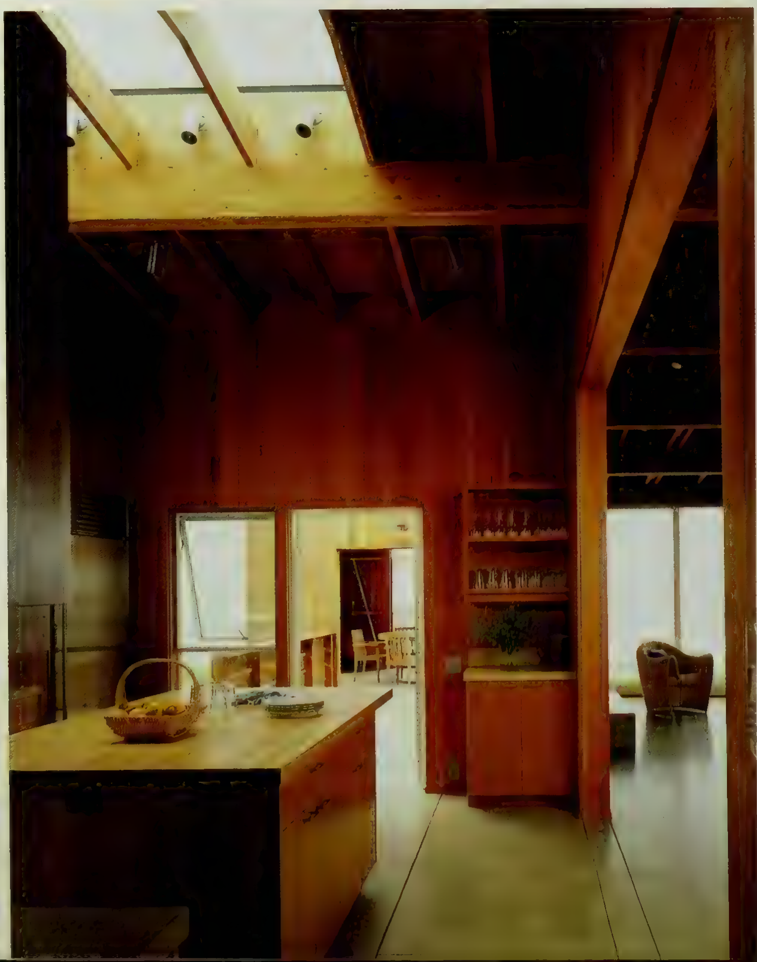
Working from family snapshots, the architects learned that the old house had an outdoor fireplace that became part of the inspiration for an indoor/outdoor kitchen. "That outdoor fireplace was on the leeward side, and they knew it worked really well in that location," says partner Eric Haesloop, AIA.

The kitchen flows from the open floor plan of the house, which gives the house a casual, vacation-home feel, according to Haesloop. But the kitchen also flows in a different direction. "What's really neat about this kitchen," Haesloop says, "is that there's a Dutch door that goes to the outdoor fireplace." Then, past the outdoor fireplace, there is a dining area, half outdoors, but protected from ocean winds by windows. The kitchen even has its own set of stairs down to the beach, and a window over the sink looks directly onto Mount Tamalpais, connecting the space to the beach and the Marin Hills.

The kitchen is well outfitted for what Haesloop says is a fairly large family, but as it's for a vacation residence, "it doesn't have a lot of the features that you would put in for a full-time residence." For instance, while the open shelves contribute to the airy feeling of the house, they also replace the closed cabinets that would be needed for long-term storage. And with part-time residence in mind, the architects chose concrete floors and fir plywood, which hides dings and scratches well. Like the whole kitchen, says Haesloop, "it's easy to take care of."
Kevin Lerner

Architect: *Turnbull Griffin Haesloop Architects*
Contractor: *Robert Cain, Cove Construction*
Structural engineer: *Mike Forbes, Fratessa Forbes Wong*
Sources: *Bonelli Windows and Doors (metal windows); Zeluck (sliding and wood doors); Viking (range, oven, range hood); Sub-Zero (refrigerator); In-Sink-Erator (disposal); KitchenAid (microwave)*

A window above the sink in the kitchen (above) frames a dramatic view of the Pacific Ocean and up to the Marin Hills. Resawn Douglas fir siding lines the walls, and fir beams and decking form the ceiling (right), creating a light-filled, clean environment. A lightweight, sand-colored concrete floor runs throughout the beach house.



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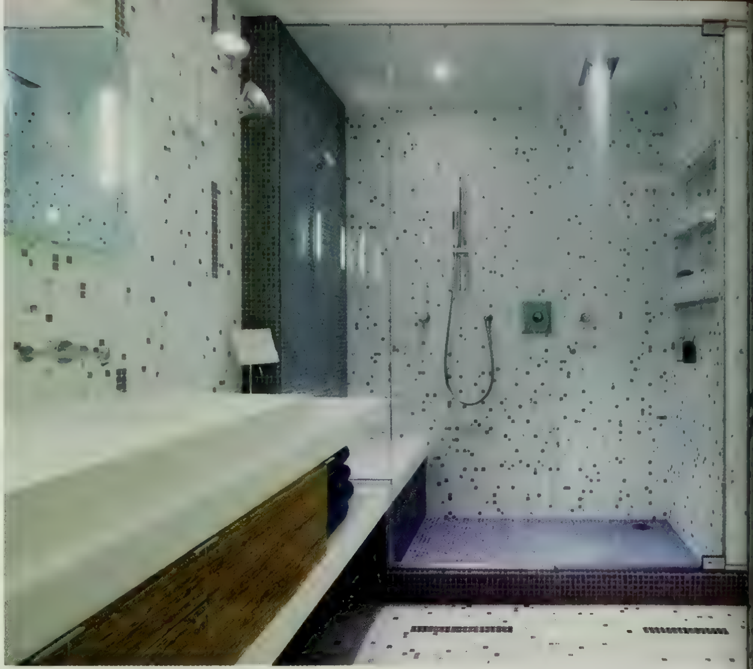


A young architecture firm thoughtfully renovates a New York City bathroom

While talking about the renovation of a master bath in Manhattan's Tribeca neighborhood, Silva Ajemian asked rhetorically, "How much can you really do with a bathroom?" Naturally, as young architects, Ajemian and partner Jorge Prado of Todo Design are looking to spread their wings with a juicy urban commission or experiment with new construction by buying a plot of land. But by responding to the challenge of creating something new out of an ordinary bathroom renovation, they showed just how much a generic space could be improved with thoughtfully employed design and products.

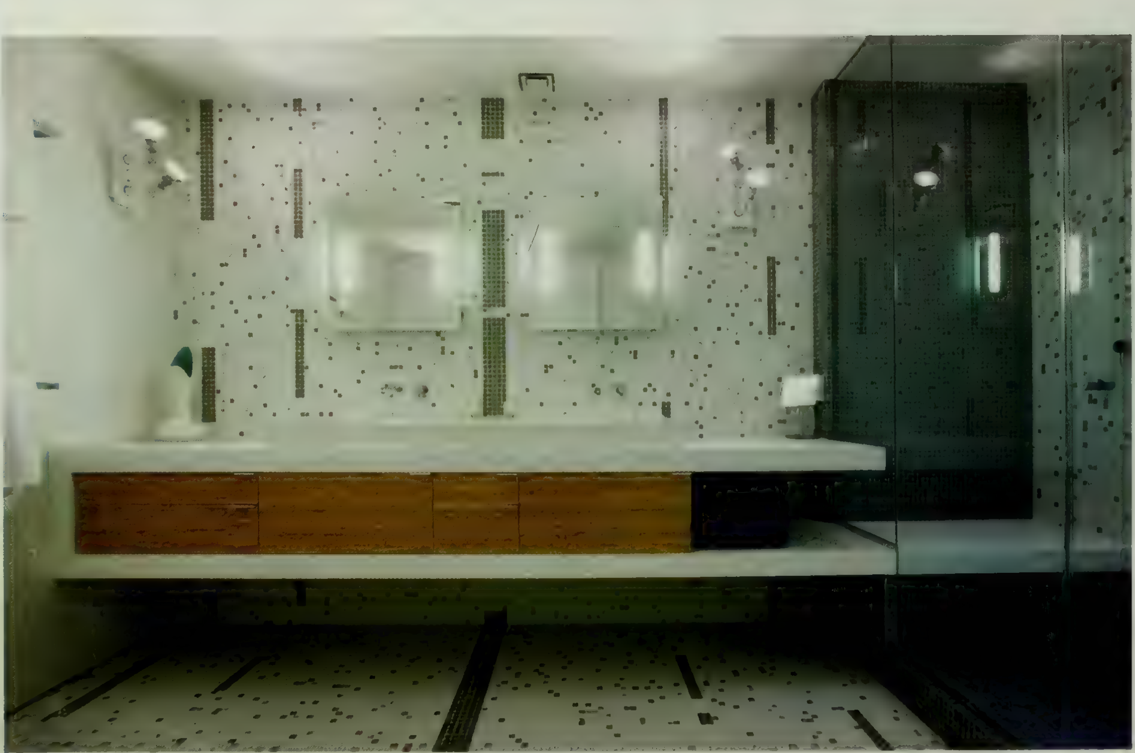
Given a 120-square-foot space to work with that included a cramped bathroom, a hallway, and a closet, Todo Design saw the opportunity to enlarge the bathroom to include a spalike shower area and accommodate daily use by a couple. Creating a luxurious room out of the extant spaces, they selectively chose their materials and designed a sleek box made of tile and glass and punctuated with wall-mounted fixtures.

"We're very interested in man-made and manufactured materials," Ajemian said, and indeed, even the wood used on the vanity is engineered, while the counter is made of Corian. Dark and light Bisazza tiles applied throughout the project form a randomly patterned background with a few striking vertical lines, recalling a Mondrian painting.

This focus on linearity extends to the custom-built, wall-mounted vanity and sink. The structure runs horizontally and penetrates the glass-enclosed shower to form the shower seat. Another dramatic line is formed by the downlit shower spout, recessed in the ceiling. Small, rectangular, mirrored niches line the shower wall.

Each of these custom measures emphasizes Todo Design's willingness to push the parameters of bathroom renovation, and it's clear the firm's future will be in architectural commissions of increasingly greater scope. *D.L.*

Architect: *Todo Design*
Structural engineer: *David Bott*
Sources: *Bisazza (tiles); DuPont Corian (counter); Weststyle 60 (sinks); Lacava (sink faucets, hand-held showerhead); Valli & Valli (accessories); Mobles 114 Barcelona (illuminated mirrors); Cor Products (wood at vanity)*



For maximum design effect, Todo Design added thoughtful touches throughout th project. In the shower area (above) they created built-in niches and chose a recessed, overhead shower-spout. The sink area (left) is wall-mounted and highlighted by a random mosaic of Bisazza tiles.

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Kitchen & Bath Portfolio

An accessible bathroom that doesn't look it

While most accessible design involves adapting or, as some would say, compromising a design to fit within the Americans with Disabilities Act guidelines, sometimes accessibility and beauty can coexist. Before another architect referred the client for the McCoy bathroom to Clint Larkan, Assoc. AIA, he had only dealt with accessible design in a few commercial projects. But in designing this room for a woman and her adult son in a wheelchair, Larkan personalized the idea of accessibility in a space where good design was as important as sink height and turning radius.

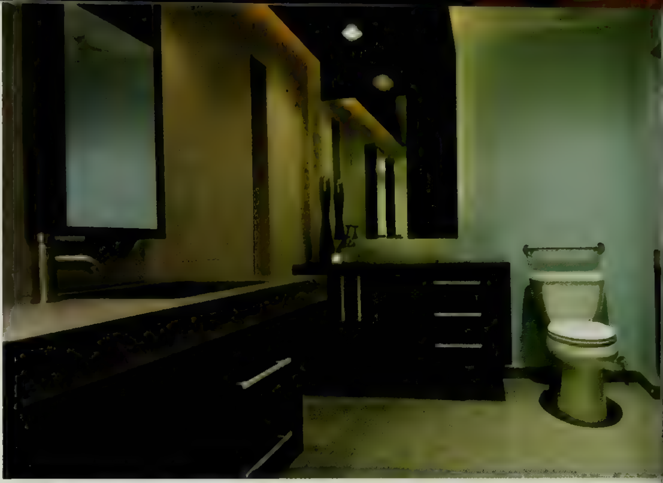
The client, located in Alexandria, Virginia, wanted "a clean, modern bathroom," Larkan said. "Nothing off the shelf." His solutions were to incorporate a walk-in closet into the design for more space; create a roll-in shower with a wet bench for the person showering, and a dry bench for an assistant; specify dual Fireslate sinks with specific knee clearances; and design a series of folding planes that also serve to disguise an awkward, existing plumbing layout.

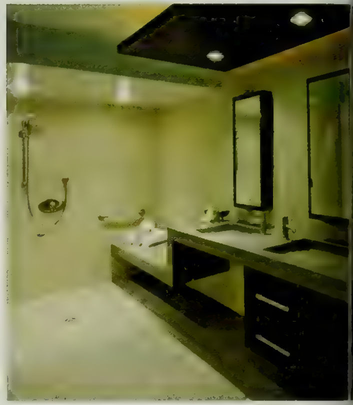
"Sometimes these awkward situations make a design more interesting," Larkan said. "And in this case, I think it did." *K.L.*

Architect: *Clint M. Larkan Design Studio*

General contractor: *Bailey Construction*

Sources: *Graff, Hansgrohe (fittings); Burger's Cabinet Shop (custom cabinetry); Fireslate (countertops); Ceramiche Caesar (ceramic tile flooring)*





The bathroom's Modern design skillfully addresses accessibility issues important to a wheelchair-bound client, such as sink height, grab bars, and a flush shower entry.

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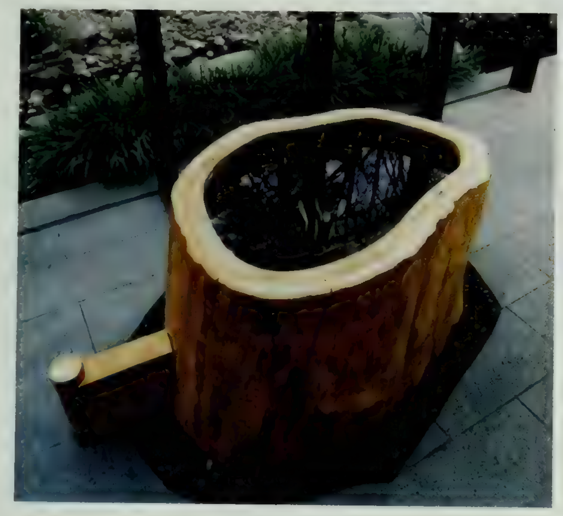
Awash in memories of Japanese tradition, a wooden stump conceals a soaking tub



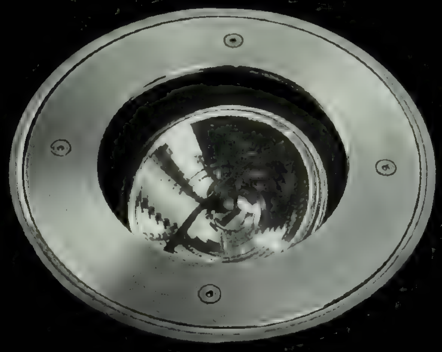
Vhen this wooden stump, located n the back of a Tokyo residence, is overed, it's not readily apparent hat purpose it serves aside from naking a rustic dining table. But he stump, made from a cedar tree oughly 200 years old, is hollow, nd its core, 4 feet wide and 3 feet eep, contains a soaking tub filled ith hot spring water.

Light has symbolic cleansing roperties, so it's fitting that this tump tub" sits in a fully glazed olarium, allowing bathers to sub-erge themselves in both water nd light, says architect Kei Sano. s also fitting, he believes, that e solarium is the vestibule to a ura (private museum) dedicated the work of Mukai Junkichi, an tist celebrated for his depictions traditional Japanese thatched rmhouses.

Junkichi lived near this estate Setagaya, a highly developed kyo suburb. "His paintings make nostalgic for the good old rural life and remind us that this area was nicer, even though nowadays it's much too modernized," Sano says. Ironically, spring bathing is another tradition that's changed: The water for this tub arrives from the mountains every two weeks by way of a 4-ton tanker truck. *J.M.*

Architect: *Sano Kei Architects*
General contractor: *Mizusawa Komuten*
Sources: *Moulder Special Company (tree stump tub manufacturer)*

The tub (above left) is made from the stump of a 200-year-old cedar tree and can be covered with a matching lid when not in use. It sits in a solarium (above) leading to a private museum in Japan.



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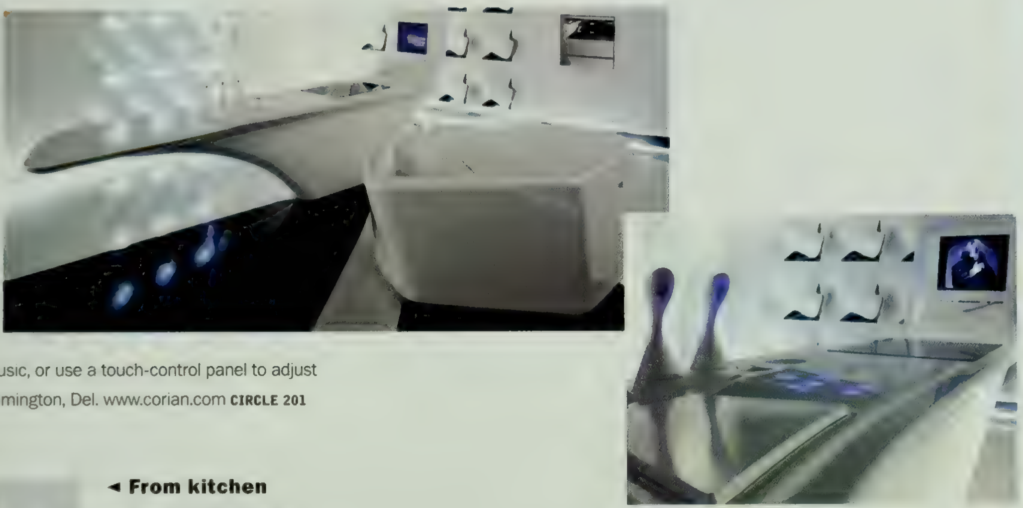
Eurocucina Review

Just past the Salone del Mobile, at the end of a nearly mile-long walkway, the biennial Eurocucina kitchen exhibit held court at Milan's new fairgrounds this past April. *Josephine Minutillo*

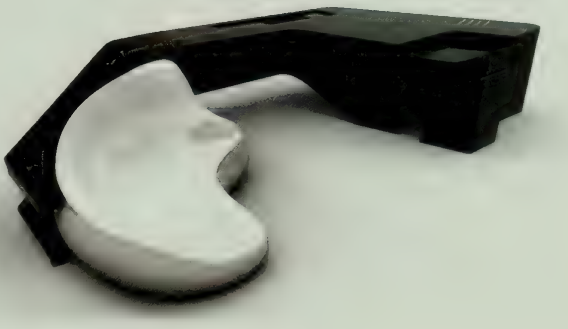


Fire island

o stranger to the Milan Saloni, architect aha Hadid has translated her vision into a turistic kitchen with the help of DuPont. ıe Z. Island project consists of two free-anding units. The elongated central unit devoted to the functions associated with e; a second, compact unit is dedicated to ater. Exploiting the formability and seamssness of Corian, the units incorporate ultimedia equipment, sound actuators, ıd LEDs within a flowing shell of Corian, ıabling users to surf the Internet, listen to music, or use a touch-control panel to adjust e environment, including aroma. DuPont, Wilmington, Del. www.corian.com **CIRCLE 201**

◂ From kitchen wares to kitchens

For decades, Alessi has been a leader in producing high-quality, high-design tools for the kitchen. This year it ventured a step farther by designing the kitchen itself. Coordinated by long-time Alessi collaborator Alessandro Mendini, the ıject involved several companies: Valcucine provided the furniture; Foster, the sinks, vetops, and hoods; and the Finnish line Oras provided the faucets. The line comprises ır designs, including Trasparente (above), which features doors and drawer panels ıde of semitransparent glass. Alessi, Crusinallo, Italy. www.alessi.com **CIRCLE 202**



▲ All in one kitchen

Not For Food is a concept kitchen by Berloni designed to take a fresh look at conventional ways of using the kitchen for contemporary families and to meet the needs of everyday life in the near future. Created by architect Enzo Eusebi of Nothing Studio, together with Berloni's design team, Not For Food is an integrated furniture system in carbon fiber that combines sophisticated kitchen functions with features such as seating, a worktop and dining area, the Internet, and music. Berloni, Pesaro, Italy. www.berloni.it **CIRCLE 203**

orce of nature

ıimalist master Claudio Silvestrin was inspired by the earth itself when designing a, his new kitchen for Minotti Cucine, which combines a rigorous geometry with ural materials like porphyry stone and cedar wood. Similar to the wall units, the osing figure of the island is uninterrupted; with no visible taps, water flows directly of the stone sink, and built-in Scholtès appliances are also hidden from view. otti Cucine, Verona, Italy. www.minotticucine.it **CIRCLE 204**

◂ Accessible cooking

Architect Marco Miscioscia, a designer attentive to the world of the disabled, created the Easy Food kitchen system for Valcucine with ergonomics and safety in mind. The stainless-steel top, made by Bautek, is created from a single mold—food is prepared, cooked, and drained from the same workstation. All wall-hung and corner units are completely accessible to those in wheelchairs. Valcucine, Pordenone, Italy. www.valcucine.it **CIRCLE 205**

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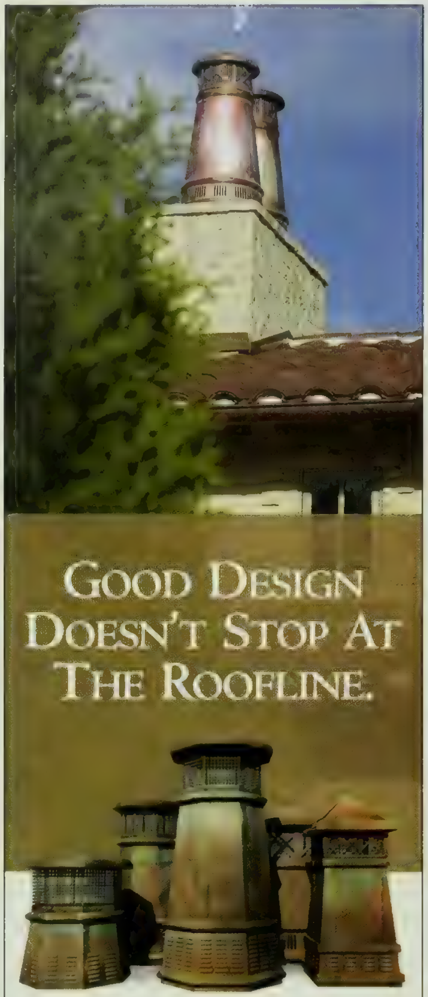

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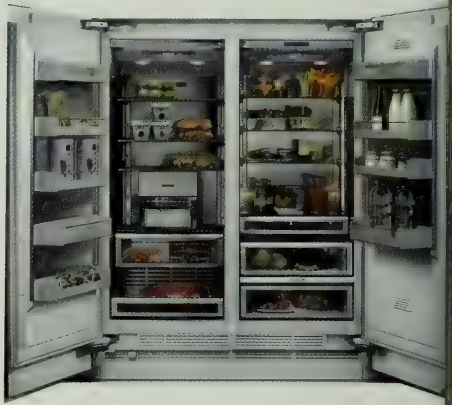
Residential Products

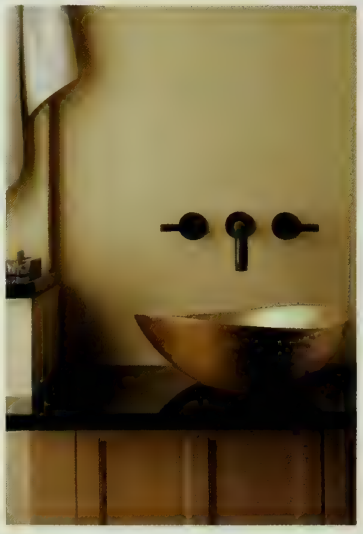
KBIS Review

Here's a roundup of products launche
at the Kitchen & Bath Industry Show,
held last April in Chicago.

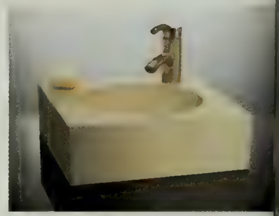
► Cool new introduction



Gaggenau had several introductions this year, including an automatic coffee machine with matching warming drawer, a new backsplash ventilator, and an ultra-slim cooktop. However, the real news was the company's entry into the U.S. refrigeration market with a new modular column refrigeration and freezer system. A heavy-load door hinge holds up to 220 pounds of door weight, allowing for a range of custom cladding materials, even marble. The glass, aluminum, and stainless-steel interior helps prevent bacteria growth and maintain an even temperature, while a motorized shelf adjusts at the push of a button—even fully loaded. Gaggenau, www.gaggenau-usa.com **CIRCLE 206**

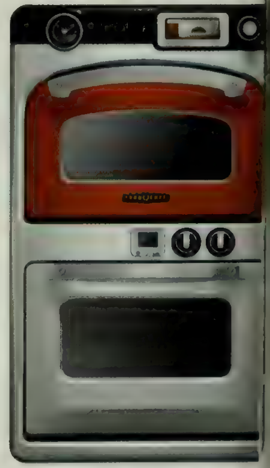


◄ Seriously solid sinks



Instead of relying on man-made materials such as concrete or cast stone to produce the solidity and beauty of stone, Stone Forest uses the real thing. All Stone Forest products are hand-carved from single blocks of natural materials such as granite, marble, travertin as well as copper, bronze, or wood. The company's latest designs incorporate hand-picked stones of onyx and sandstone. The Circ Vessel, shown above in honey-colored sandstone, comes in two sizes and features a wide, inviting basin. The Papillon sink, anoth new offering, is shown here in a golden bronze finish. All Stone Forest bronze sinks are formed using traditional sand-casting methods, and then finished, patinated, and waxed by hand. Ston Forest, Santa Fe, N.M. www.stoneforest.com **CIRCLE 207**

► Cook 15 times faster



TurboChef, a specialist in high-speed food-preparation equipment for the commercial market, introduced their first residential offering, the 30" Double Wall Speedcook oven, at a massive booth along with live demos by star chefs. Offering cooking times unheard of in the residential market—a rack of lamb in 4 minutes, steamed asparagus in 45 seconds, a 12 pound turkey in 42 minutes—the high-end oven (listing for $7,495) can cook up to 15 times faster than conventional methods without sacrificing taste or quality. To achieve these times, the oven's high-speed forced air impingement cooks food from the outside in while jets of recirculating air lock in moisture and microwaves distribute precise bursts of energy that cook the food from the inside out. The oven's retro design features broadly curved edges and hearth-shaped doors in six porcelain enamel colors or stainless steel. A menu driven control with an LCD interface for easy interaction, an intuitive Cookwheel Controller and Cook Navigator display screen, and seven Speedcook modes are all intended to make the oven "as easy to use as an ATM," according to the manufacturer. TurboChef, Atlanta. www.turbochef.com **CIRCLE 208**

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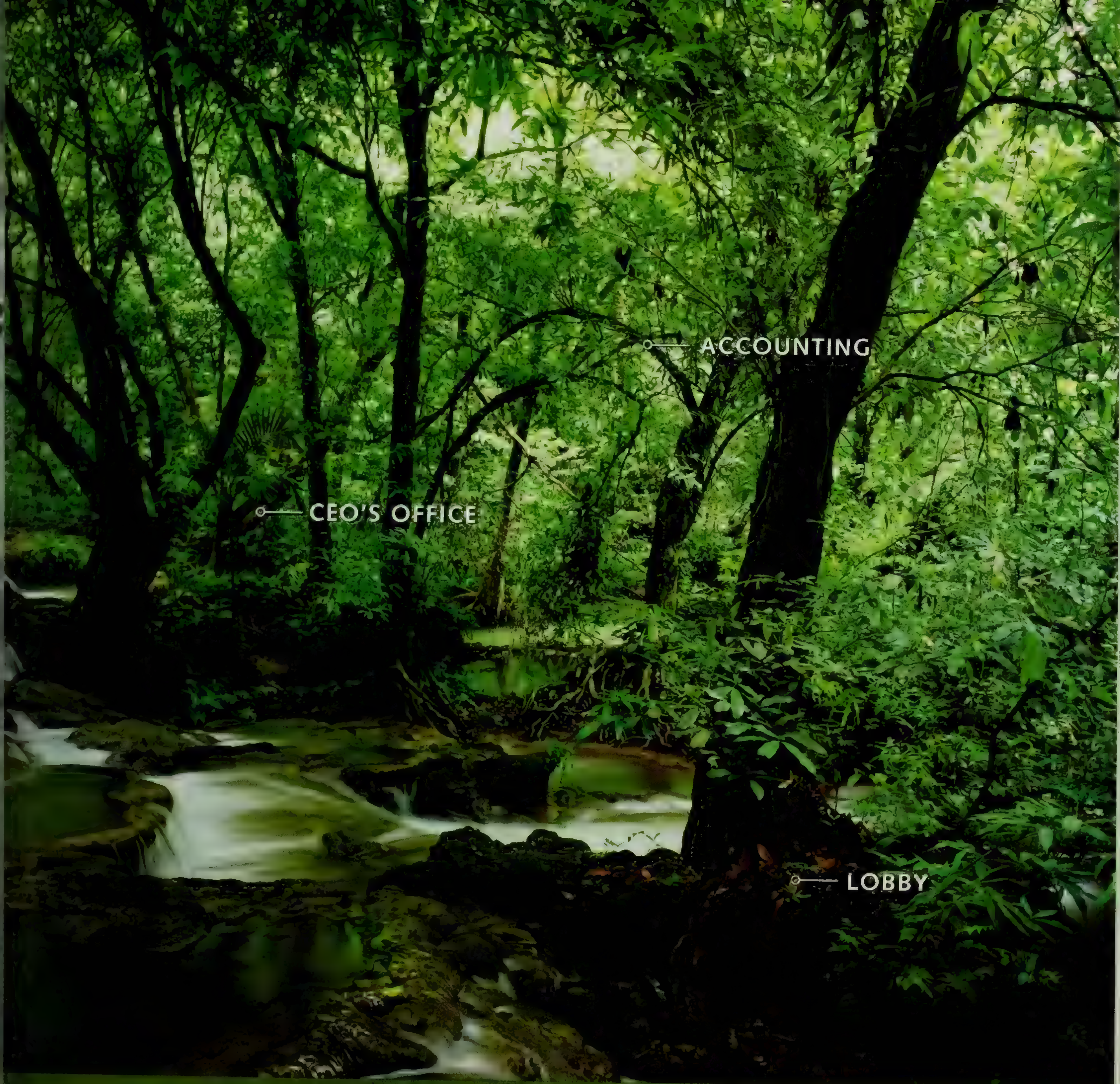

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Residential Products

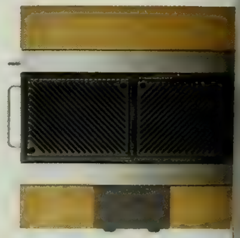
KBIS Review

► **Baths without borders**

Sieger Design's 2nd Floor (right), from Duravit, is a comprehensive collection of fixtures and furnishings notable for its breadth of product and price. Long and lean, materials include elegant wood veneers, chrome, and white porcelain. A selection of lavs is offered with a proprietary stainless-steel glaze said to be durable and spot-resistant. From Vienna-based Eoos, the freestanding Sundeck tub (below) can be installed indoors within a wood veneer surround or outside encased in weather-resistant laminate. Outfitted with a full-depth overflow, optional air or whirlpool jets, LED lighting, and remote control, Sundeck doubles as a lounge when its marine-quality padded top is folded flat. Duravit, Duluth, Ga. www.duravit.com **CIRCLE 209**

▼► **Well done Modernist grill**

Dubbed "an architectural reinvention of outdoor grilling," the Fuego grill was designed by Robert Brunner, a partner at Pentagram Design, whose works are in the permanent collections of New York's Museum of Modern Art and the San Francisco Museum of Modern Art. The modern grill is the first product from Fuego North America, a new company run by Alex Siow, founder of Zephyr Ventilation. Set to start shipping in September, the grill will come in two scales: Fuego 01, a 42" model suited for a rooftop garden or backyard deck, and Fuego 02, a balcony size 30" model. The larger model offers a retractable lid, electronic controls, and a quick-change drawer system for gas, charcoal, or infrared cooking, or a combination of the three. Fuego, San Francisco. www.fuegoliving.com **CIRCLE 2**



► **Bath from outer space**

Displayed in an enclosed, white-screened room, the Ross Lovegrove collection gave an otherworldly feel to the VitrA USA booth at this year's show. Lovegrove's collection for the Turkish ceramic company was inspired by the concept of "organic essentialism"; showerheads resemble mushrooms growing from the ceiling, faucets sprout like branches (left), and levers are pebble-shaped. The line includes 175 products, including plumbing fixtures, wall and floor tiles, bathtubs, shower trays, bathroom furniture, faucets, and accessories. The soft-close toilet and bidet lids come in a transluce option with motion-activated LED lighting (right). VitrA, Atlanta. www.vitra-istanbulcollection.com **CIRCLE 211**

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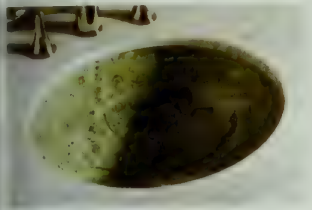
Residential Products

KBIS Review

▸ Arty sinks, techy showers

s usual, Kohler's expansive booth at KBIS was brimming with ew introductions, including a smarter toilet seat and the com- any's first hands-free kitchen faucet. The elegant Mille Fleurs esign on the Caxton undercounter lavatory (below) addresses he continued interest in metallic embellishment as well as aditionally designed Artist Edition fixtures. A base of either anslucent sage or clear glaze provides a backdrop for a delicate oral motif that takes its cue from folk-art genres of embroidery, tapestry, and rosemaling (Norwegian decorative painting).



The Kohler DTV shower-control product (above), another new offering, features a thermostatic valve and digital interface to customize the shower experience utilizing multiple showerheads, hand showers, and body sprays. The DTV's preset hydrotherapy experiences include up massage, down massage, wave massage, as well as temperature erapy that can run from hot to cold or vice versa. Multiple users can preprogram their own customized experience d call them up instantly at the touch of a button. Kohler, Kohler, Wis. www.kohler.com **CIRCLE 212**

◂ Polka dot patterns

Ann Sacks, a division of Kohler's Interiors Group, once again displayed a stunning new range of tile, stone, and concrete products by in-house and guest designers. This year's collection included a line of tile crafted entirely of mesquite wood harvested in Texas, a concrete flooring with a simple geometric pattern by designer Angela Adams, and a fluted and beaded tile by designer Barbara Barry. For her latest collaboration with Ann Sacks, artist Erin Adams was able to develop a method of cutting glass tile that allowed for very fine lines and curves. Her new glass tile collection consists of mosaic patterns composed in brilliant jewel tones, including a natural scene of silhouetted curling leafy vines and a graphic assortment of circles in varying sizes (left). Both mosaics are made to order, allowing for individual art installations. Ann Sacks, Portland. www.annsacks.com **CIRCLE 213**

Bathing for technophiles

ard-winning architect and product designer Jean Nouvel has designed a new collection of bath- m fixtures for Jado that include a lavatory faucet, tub filler, and shower totem that incorporate ctronics for temperature control and touch-sensitive operation. The faucets have programmable sets so users can save their favorite volume and temperature settings. The 44" elongated wer totem is a polished chrome tube that curves and tens into a Minimalist bend at the top for the shower- ad. An integrated automatic diverter controls a handheld wer wand, popping up a spray head that retracts when longer in use. Like the shower totem, Novel's lav faucet tub filler feature subtle, smooth curves and rounded ners. The tub filler (right) is teamed with a handheld ay that has the same pop-up spray head as the shower em. Jado, Chandler, Ariz. www.jadousa.com **CIRCLE 214**

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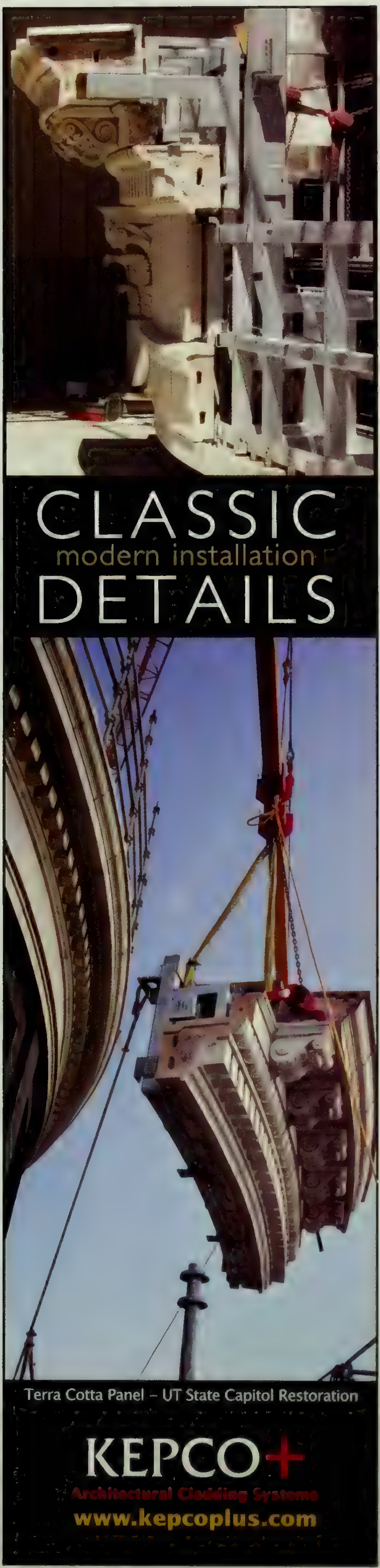
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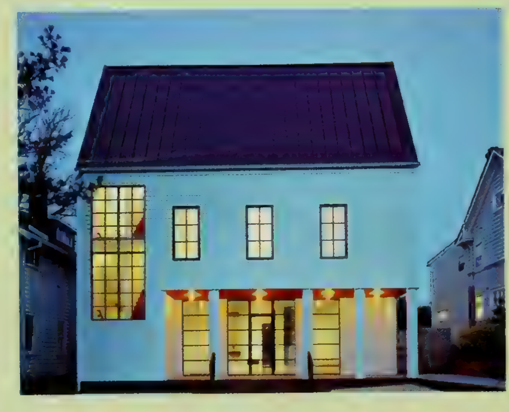
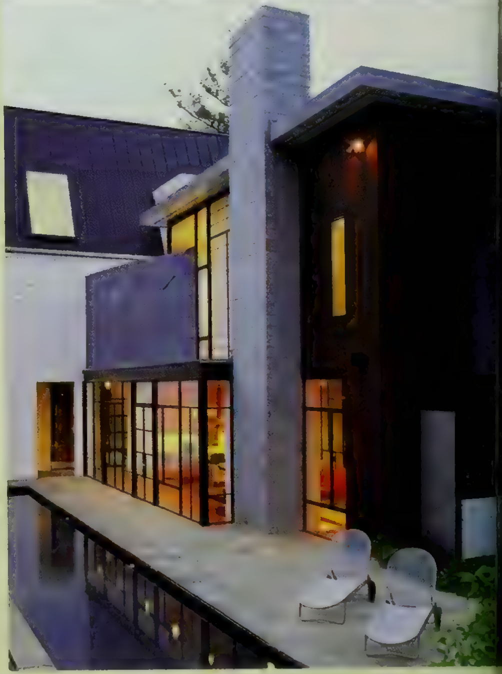
Project: *Kessler Residence*
Location: *Chevy Chase, Md.*
Architect: *Robert M. Gurney, FAIA, Architect*
Client: *Lewis and Tamara Kessler*

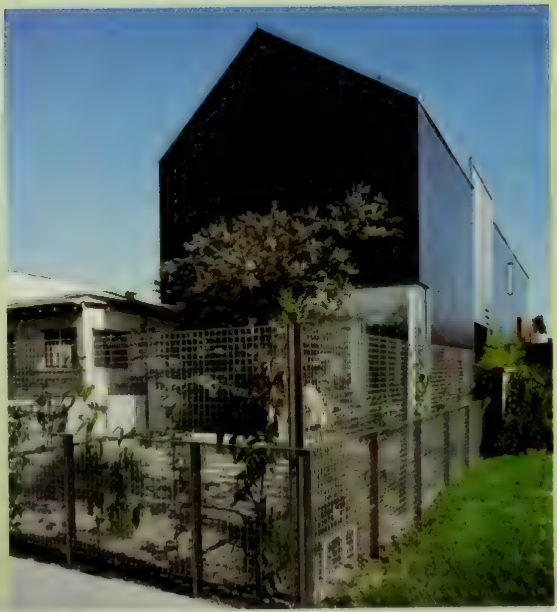
In a neighborhood full of older houses, the Kessler Residence successfully weighs the balance between nostalgia and Modernism. Its front elevation features a colonnaded porch, simple fenestration, and a steeply pitched roof—conventional elements, to be sure, but ones that are executed in an unadorned, contemporary manner. At the rear of the property, by contrast, flat rooflines and horizontal massing predominate. On this south-facing side of the building, generous amounts of glazing provide views of a narrow, 75-foot-long lap pool, while translucent panels provide privacy from the house next door.





Project: *The Coconut House*
Location: *Los Angeles*
Architect: *Lee & Mundwiler Architects*
Client: *Brenda Bergman*

The Coconut House, similar to its namesake fruit, is clad with dark fiber core panels covered in a wooden veneer—but this hard shell conceals a sumptuous, white-walled interior. The main entry sits to the western side of the property, away from the street, while opposite, a small courtyard punctuates the eastern elevation. Windows surrounding the courtyard allow daylight to penetrate throughout the building.



ho needs air-conditioning, especially in these energy-conscious times, when you can keep a home ool with solar shades—or design a house to maximize cross ventilation? This notion was shared y many of the architects whose residential projects were recognized in this year's awards program. ince 2000, the AIA's Housing Committee Knowledge Community has lauded the most innovative ingle- and multifamily housing. Partnering with the U.S. Department of Housing & Urban evelopment, it also recognizes excellence in community design and accessibility. ***James Murdock***

Project: *slot house*
Location: *Brooklyn, N.Y.*
Architect: *noroof architects*
Client: *Margarita McGrath and Scott Oliver*

In an age of teardowns and sprawl, Margarita McGrath and Scott Oliver, AIA, pursued a more sensitive strategy in renovating their own residence. Rather than fell a 60-foot-tall maple, which would have freed precious space in the front garden of a 25-by-80-foot lot in a crowded urban neighborhood, the pair chose to save the tree and make it the organizing element of their project. To provide new views of the tree from inside the house, the architects cut a vertical slot into the front elevation. The partial demolition of this wall revealed an internal skeleton of cedar boards and brick, materials that the architects echoed in their choices for the new construction.

ct: *Avis Ranch*
tion: *Clyde Park, Mont.*
tect: *Fernau and*
nan Architects
t: *Anne and Greg Avis*

anch includes seven build-
plit into two clusters: the
house, garage, and a converted granary comprising one; guest quarters, a barn, and stables, the other. All but two of these buildings were renovated or adapted for new uses—meeting the client's goals of respecting the land and recycling, just as any good farmer would (see page 118).

Project: *Tower House*
Location: *Chicago*
Architect: *Frederick Phillips and Associates*
Client: *Frederick Phillips, FAIA*

The skyline of Chicago, the city that gave rise to the skyscraper, inspired the organization of rooms and circulation within this four-story residence. A terrace and living spaces occupy the top two floors, with the best views, while bedrooms and a garage take up the lowest floors. A separate stair tower, made of concrete block that contrasts with the steel-clad house, connects all levels.

PHOTOGRAPHY: © MAXWELL MACKENZIE ARCHITECTURAL PHOTOGRAPHER (KESSLER RESIDENCE); JULIUS SHULMAN AND JUERGEN NOGAI (COCONUT HOUSE); CHUCK CHOI ARCHITECTURAL PHOTOGRAPHY (SLOT HOUSE); J.K. LAWRENCE PHOTOGRAPHY (AVIS RANCH); KILDOW PHOTOGRAPHY (TOWER HOUSE)

Residential News

AIA HOUSING COMMITTEE AWARD: MULTIFAMILY CUSTOM

Project: *University of Washington—Nordheim Court*
Location: *Seattle*
Architect: *Mithun*
Client: *Lorig Associates*

Nordheim Court provides affordable housing for 460 students at the University of Washington. A storm-water-retention pond and an existing stand of trees anchor the complex's southwest edge, while an underground parking garage frees space above for landscaped courtyards where the dorm residents can socialize.

Project: *Metro Hollywood Mixed-Use*
Location: *Los Angeles*
Architect: *Kanner Architects, with McCormack Baron Salazar*
Client: *Lyle Parks, Jr.*

Mass transit is still relatively new to Los Angeles, as is high-density housing. But the Metro-Hollywood apartment building—which also includes retail and child-care components—proves that the two make an excellent pairing. Heavy steel framing was used for the building's structure, which sits atop a subway station, so to stay within budget Kanner Architects used painted plaster instead of a more costly material for exterior cladding.

Project: *K Lofts*
Location: *San Diego*
Architect: *Jonathan Segal, FAIA*
Client: *Jonathan Segal, FAIA*

K Lofts, a nine-unit affordable apartment complex, takes its name from a Circle K convenience store that previously occupied the site.
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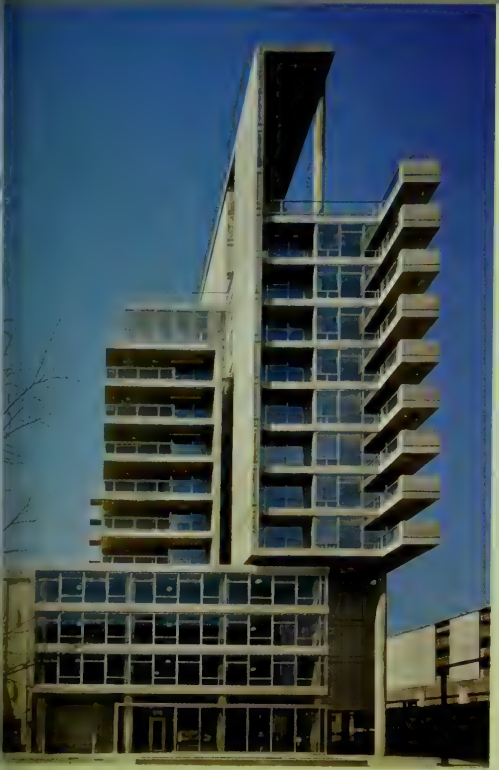

Project: *Contemporaine at 516 North Wells*
Location: *Chicago*
Architect: *Perkins+Will*
Client: *CMK Development*

A celebration of glass, concrete, and cantilevered massing, Contemporaine at 516 Wells is not your father's condo building. The tower's four-story podium contains retail and parking, made fully visible, along with the building's structural-steel braces, thanks to liberal glazing. Above it rise 11 floors containing a total of 28 condominiums, each featuring cantilevered balconies and views of Chicago's downtown skyscrapers, located south of this site in a former warehouse district. With its mix of bold forms and varying scales, Contemporaine energizes both the streetscape and the skyline.

t: *Orange Grove*
on: *West Hollywood,*

ect: *Pugh + Scarpa*
Urban Environments, LA

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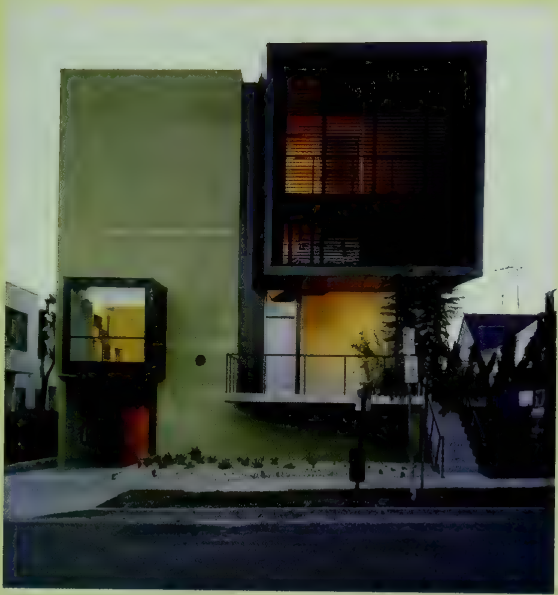
glazed roll-up doors provide CinemaScope-like views of an internal court and passages.



PHOTOGRAPHY: © DOUG SCOTT PHOTOGRAPHY (NORDHEIM COURT); JOHN LINDEN (METRO HOLLYWOOD); PAUL BODY (K LOFTS); JAMES STEINKAMP (CONTEMPORAINE); MARVIN RAND (ORANGE GROVE)

Residential News

AIA HOUSING COMMITTEE AWARD: INNOVATION IN HOUSING DESIGN

Project: *Solar Umbrella*
Location: *Venice, Calif.*
Architect: *Pugh + Scarpa*
Client: *Angela Brook and Lawrence Scarpa*

With a nod to Paul Rudolph, architect Lawrence Scarpa used a canopy to shield an addition to his own bungalow. This "solar umbrella" reduces heat gain, while photovoltaic panels applied along the southern exposure generate enough electricity to power the entire house, making this residence "energy neutral."

Project: *The Modern Modular*
Location: *Multiple locations*
Architect: *Resolution: 4 Architecture*

Mass customization is the key to success for computer maker Dell. Why not apply the same concept to prefabricated housing? With this idea, and a flair for Modernism, Resolution: 4 Architecture designed modules that clients configure according to their individual tastes.

AIA HOUSING COMMITTEE AWARD: COMMUNITY DESIGN

Project: *Live/Work Artists' Housing*
Location: *Mount Rainier, Md.*
Architect: *Hammel, Green and Abrahamson, with The Pan Group*
Client: *Artspace Projects*

This 44-unit apartment complex, developed to be the first phase of an arts and culture district on Route 1 in Maryland, provides low-cost housing for artists. Each of the 18 different unit types features open, loftlike floor plans. Two common rooms and a workshop provide extra space for residents to collaborate and exhibit their work.

HUD AWARDS: MIXED-USE/MIXED-INCOME

Project: *Esther Short Commons*
Location: *Vancouver, Wash.*
Architect: *William Wilson Architects*
Client: *Vancouver Housing Authority*

The architect incorporated a 20,000-square-foot farmer's market into the ground floor of Esther Commons, using garage doors to maintain a direct connection between this space and the street. Nearly all of the 160 apartments above receive direct sunlight and feature views of a park or a river nearby.

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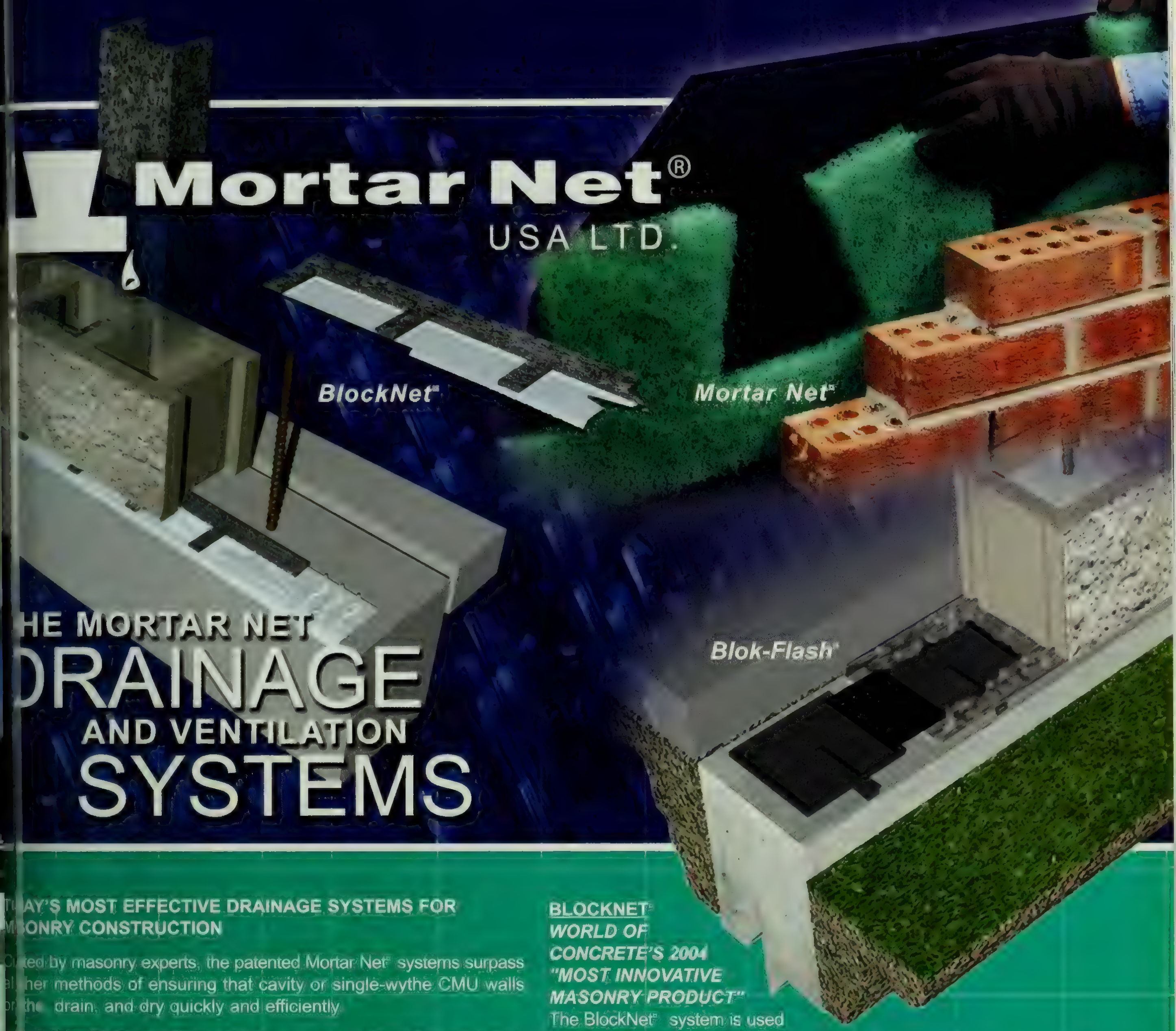

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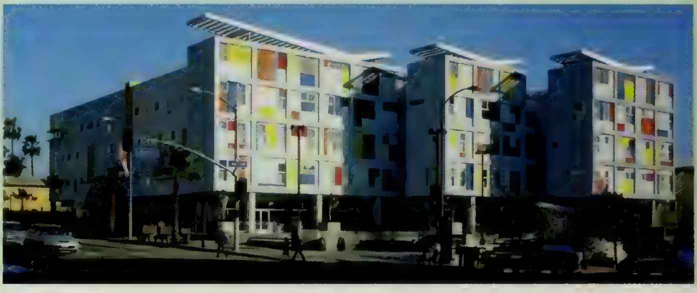
Residential News

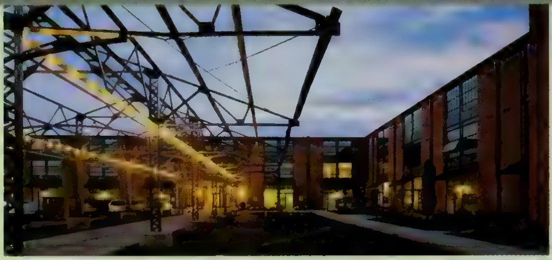
HUD AWARDS: MIXED-USE/MIXED-INCOME

Project: *Metro Hollywood Mixed-Use Building*
Location: *Los Angeles*
Architect: *Kanner Architects, with McCormack Baron Salazar*
Client: *Lyle Parks, Jr.*

This 60-unit apartment building is situated on a busy street corner above a subway station, so mitigating noise figured high on the list of design challenges. The solution lay in reducing the amount of glazing and placing windows strategically within the Mondrian-like facades.



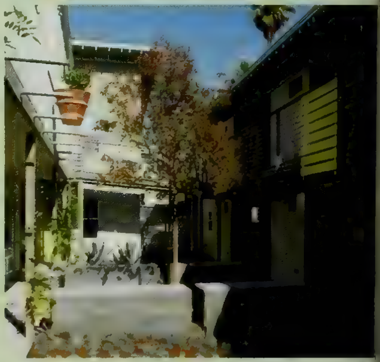
HUD AWARDS: ALLAN J. ROTHMAN ACCESSIBILITY



Project: *6 North Apartments*
Location: *St. Louis*
Architect: *Trivers Associates*
Client: *McCormack Baron Salazar*

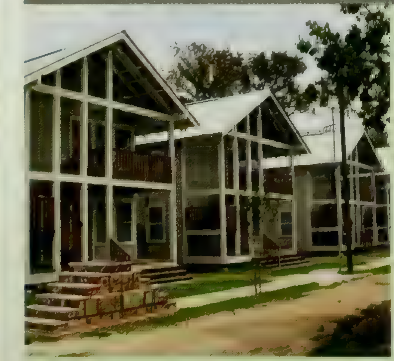
With features such as sliding walls that help maximize interior floor area, raised appliances, and adjustable-height countertops, the 80 apartments in this converted industrial building are fully accessible for wheelchair-bound tenants. An existing metal canopy serves as an outdoor gathering space at the heart of the complex.

Project: *Waterloo Heights Apartments*
Location: *Los Angeles*
Architect: *Koning Eizenberg Architecture*
Client: *Hollywood Community Housing*



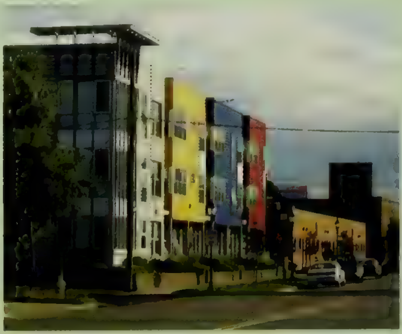
All of the 18 apartments at Waterloo Heights feature a deck, patio, or French doors that open onto an internal court, nurturing a sense of community among the elderly and disabled residents. Window placement facilitates cross ventilation. The architect's materials palette was influenced by both Craftsman- and Spanish-style houses in the surrounding area.

HUD AWARDS: COMMUNITY BY DESIGN



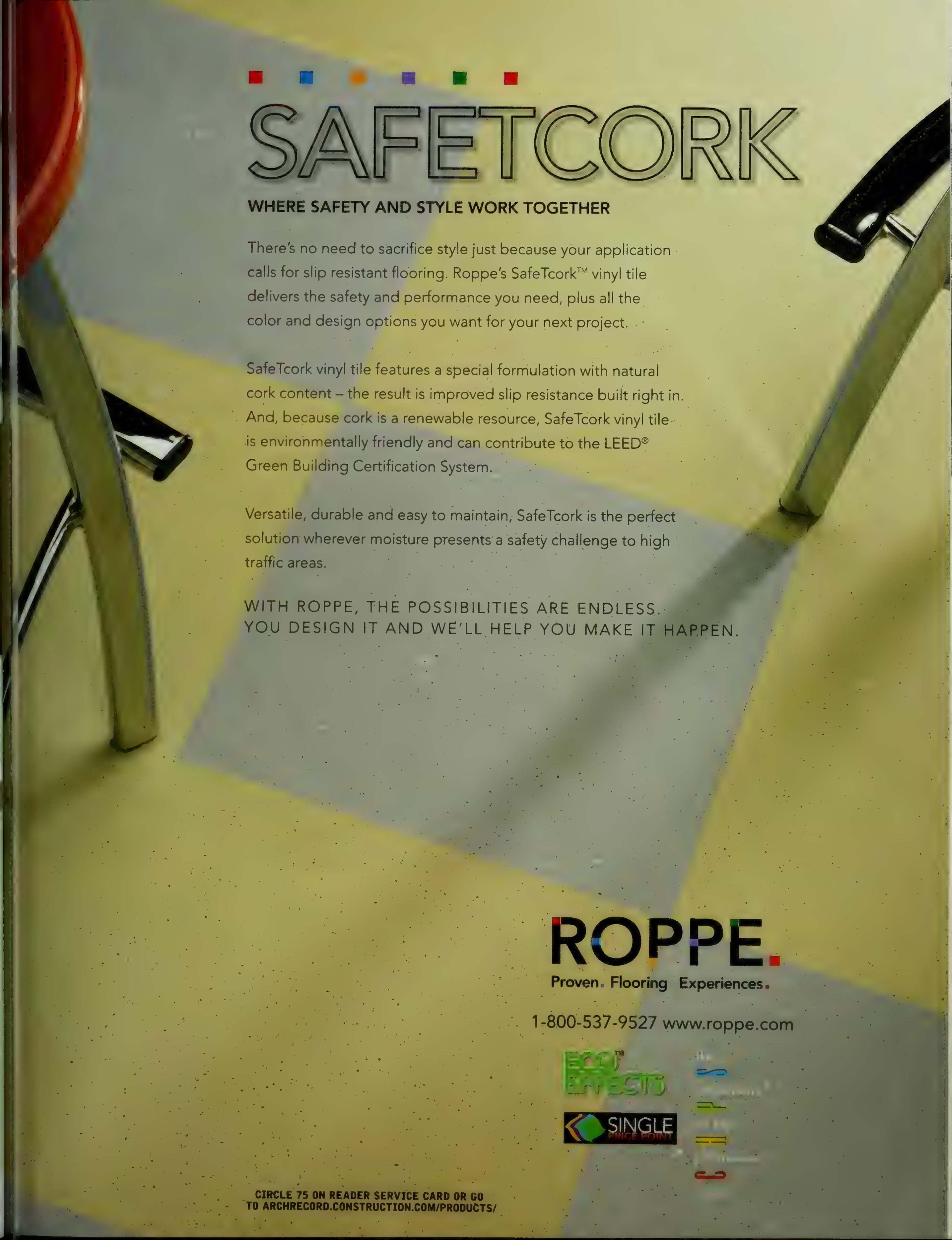
Partnering with several community groups, architecture students from Rice University designed and built three different residential prototypes—ranging in size from 500 to 900 square feet—based on the vernacular of Houston's row houses. The duplexes and detached houses alike feature porches and deep roof overhangs, elements that help extend the living space outdoors.

Project: *Building Community*
Location: *Houston*
Architect: *Rice Building Workshop*
Client: *Project Row Houses*



Project: *Blake Street Flats*
Location: *Denver*
Architect: *Humphries Poli Architects*
Client: *Integral Properties*

The developer of this 24-unit apartment building faced resistance from neighbors who advocated home ownership over rentals. Humphries Poli Architects helped to win over critics by designing a building that blends seamlessly into its context of historic homes and warehouses.



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Products

Glass & Glazing

This month's focus is on the latest designs and technologies in the glass and glazing arena, whether intended for **structural, fire-rated, or decorative use.** For a good place to scout the latest in the industry, check out the **GlassBuild America tradeshow**, held in Las Vegas from 9/19 to 9/21. *Rita Catinella Orrell*

tone and water inspire a collection of new glass textures

ones, the latest addition to Joel rman Glass Studios' award- nning Bricks, Boards, and Sticks llection of handcrafted kiln-cast tured glass, made its debut at NeoCon tradeshow held last nth in Chicago. Stones adds a w dimension to the collection of ltidimensional cast-glass textures pired by abstractions of organic lding materials. Like all Joel rman kiln-cast glass textures, Stones can be custom designed into a variety of interior and exterior applications including partition and boardroom walls, office side light panels, balustrades, wall cladding, and doors. The new line is available in panels up to 52" wide x 108" high, in ½", ¾", and 1" thicknesses.

Joining Stones is the Piovera texture and the Imprint Collection. Piovera features a specially modified coating that bonds structurally to the glass surface resulting in a transparent finish that gives the appearance of rain on glass. The Imprint Collection, Joel Berman's new standard glass collection, offers two new scalable kiln-cast organic textures: Stria, inspired by geological striations, and Nuv'eau, whose carvings resemble moving water. Joel Berman Glass Studios, Vancouver, Canada. www.jbermanglass.com

CIRCLE 215

Clockwise from left: The texture of Stones kiln-cast glass shows best when backlit; Nuv'eau is a play on "new water" and recalls water in motion; Stria is named after the geological-like striations in the texture; Piovera coated glass evokes rain pouring down a windowpane.

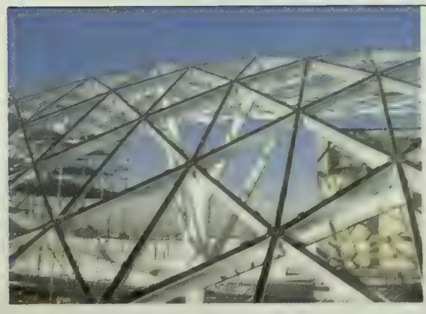
more information, circle item numbers on Reader Service Card or go to www.archrecord.com, under Products, then Reader Service.

▲ Glass with a sense of motion

Piccolo is Lamberts' newest addition to its family of LINIT channel glasses, developed in response to architect's demands for greater design choices in structural glass systems. The vertical fluting, reminiscent of columns found in Greco/Roman architecture, creates a gentle sense of motion and interesting degrees of obscurity. Piccolo is available in tempered or annealed form, as are all LINIT channel glass textures. Bendheim Wall Systems, Passaic, N.J. www.bendheim.com **CIRCLE 216**

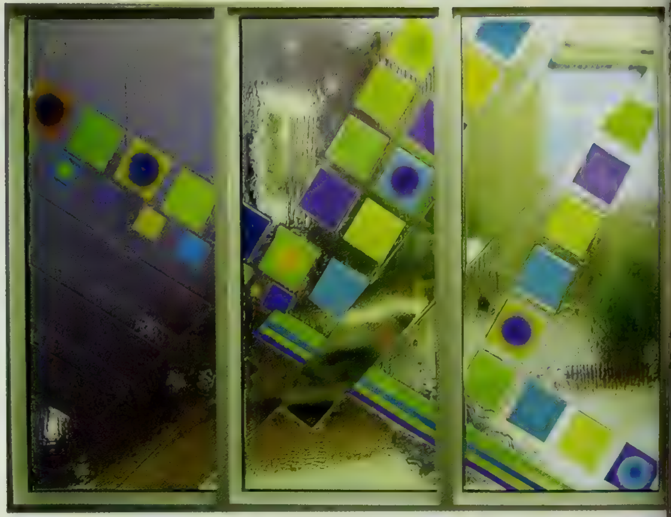
▼ 20 minute addition to the lineup

Pilkington has expanded its Fire Protection Glass product range to include a 20 minute Pilkington Pyrodur product. Pyrodur 20-104 is UL-listed and available in a thickness of approximately ¼". Pyrodur blocks around 90 percent of radiant heat and can be used for interior applications including windows and doors. Pilkington also offers Pyrodur 20-200 in a thickness of .39" and a complete product range of Pyrodur products for 45, 60, 90, and 120 minute fire resistance. Technical Glass Products, Kirkland, Wash., www.fireglass.com **CIRCLE 218**



◄ Floating glass fastening system

A corrosion-free glass fastening system has been developed by Novum Structures, formerly Mero Structures. The new Edge Clamped Glass (ECG) System is engineered to provide a clean, transparent way to fasten glazing directly to the supporting structure without the use of a standard aluminum-mullion support system. By eliminating the aluminum mullion, the glazing "floats" on top of the structure. This system, sealed around the glass panel's perimeter by a wet silicone and silicone-gasket technology, creates a transparent glass envelope. ECG can be used to support monolithic, laminated, and insulated glazing systems. Novum Structures, Menomonee Falls, Wis. www.novumstructures.com **CIRCLE 220**

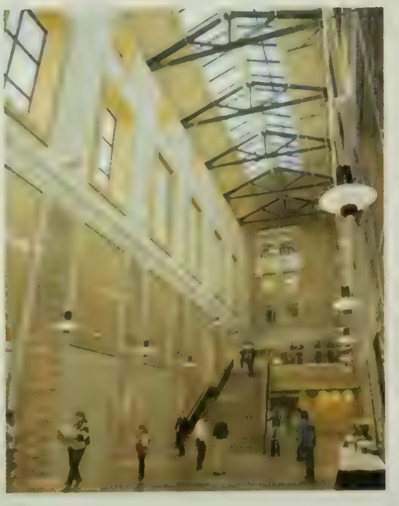


▲ Pretty, safe glass

Meltdown Glass Art & Design of Chandler, Arizona, has aligned itself with Safti First to provide fire-resistant kiln-cast art glass. The alliance opens doors for designers who want to enhance buildings such as hospitals and schools with art glass while staying within code. Safti First's patented gel-filled endothermic glazing offers fire protection as well as sound reduction. Ratings are offered from 45 to 120 minutes and meet hose stream, pressure, and thermal shock requirements. Safti First, San Francisco. www.safti.com **CIRCLE 217**

◄ Passes the test

Aluflam has completed the UL fire testing of its 60-minute extruded aluminum curtain-wall system. The system can be specified fo interior or exterior applica- tions, and is designed to maximize light and vision while blending in with stan dard nonrated aluminum products. The system's alu minum framing is combined with clear, safety-, and fire-rated glass by Vetrotech Saint-Gobain. Aluflam N.A., Huntington Beach, Calif. www.aluflam-usa.com **CIRCLE 219**



◄ Controlling light and

In addition to various energy-eff upgrades, facility managers at T University of Colorado applied 8 square feet of V-Kool window fil prevent campus buildings from heating. The V-Kool 40 product 65 percent of solar heat while t mitting 42.8 percent of visible li condition that is ideal for the en ment. The product's colorless transparency and non-mirrorlike reflectance allowed managers t it selectively to windows in build where heat gain was an issue, v maintaining a uniform design. V Houston. www.v-kool.com **CIRC**

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isitors come in droves as the Milan urniture Fair settles into its new home

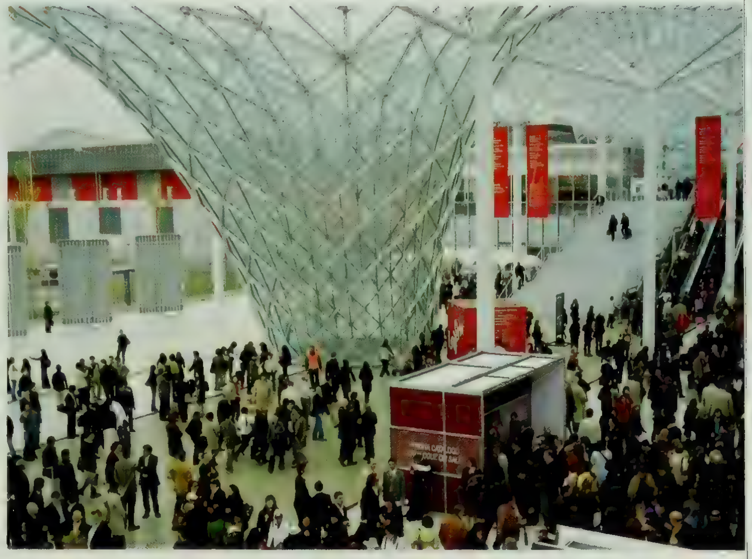
here was a lot riding on this year's alone del Mobile. Though 2005 roved to be a tough year for the alian furniture industry, hopes were gh that the furniture fair's debut its new venue, Massimiliano uksas's $700 million Fiera di Milano egastructure in the RhoPero sub-b [RECORD, August 2005, page 92] ould generate even more interest what is already an annual frenzy industry insiders, designers, hibitors, media, and spectators.

By the time the show closed doors on April 18, it was obvious e gamble had paid off. Visitors ime in record numbers—more an 220,000 people poured into e city and through the gates of e fairgrounds. While the Fiera's 2.1 llion square feet provided enough ace for the throngs of visitors, the me could not be said for the rest the city's infrastructure. Riders ueezed their way into the newly tended subway line, and traffic is often at a standstill as Milan's pulation increased by nearly 20 rcent for one week in April.

For those familiar with convenn centers, Fuksas's design is an inspiring experience. But was it enough to provide Italy's furniture industry, and the fair itself, with that much-needed shot in the arm? Italian design remains unrivaled in terms of quality and innovation, but the business of design seems to have grown too big for its britches. Smaller, more avant-garde lines continue to get eaten up by larger ones. Cappellini's takeover by the Poltrona Frau Group is old news, but its inclusion in the massive display at the fairgrounds alongside Frau and other acquisitions Thonet, Gufram, Cassina, and Alias lent a homogeneous feel to the whole thing. Another leading Italian line, B&B Italia, itself recently sold off, took over the once-promising Monica Armani line, as well as a significant share in the daring Dutch line Moooi. It remains to be seen whether this type of merger will produce better or blander design.

The staggering array of off-site exhibits that greeted visitors upon leaving the Fiera was yet another reminder the fair may be growing out of control—to see them all would require much more than one week.

Josephine Minutillo

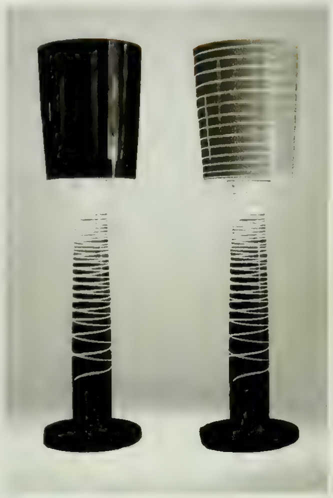


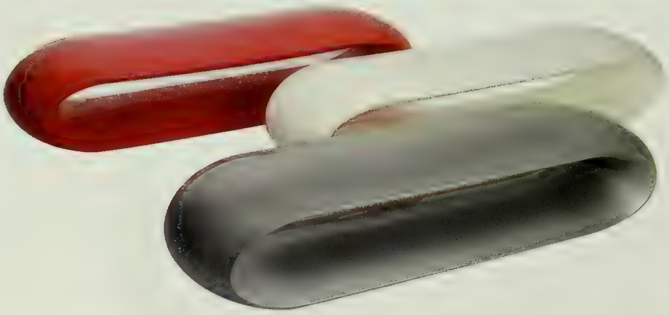
Clockwise from top: An endless stream of visitors to Massimiliano Fuksas's Fiera di Milano, the Salone del Mobile's new home in RhoPero; inside Moroso's lively stand at the fairgrounds; Zaha Hadid with Patrik Schumacher at the presentation of her new Z. Island kitchen for DuPont Corian; the sprawling Pitti Living off-site exhibit on Via Tortona.

Product Briefs Milan: Outdoor Life

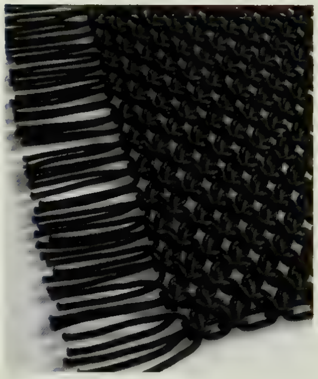
▼► Garden delights

Serralunga has expanded its production beyond planters to include furnishings and lighting for use indoors and out. This year's Salone marked the opening of its new Milan showroom designed by Luisa Bocchietto, who also designed new seating for the company. Loop (below), a bench by Christophe Pillet, is an example of large-format chrome plating. The open shape and polyethylene body make these benches extremely light. Marc Sadler's Lady Jane (right) and Lady Mary garden lamps are a first for the company. The polyethylene body is engraved for contrasts in color and light. Serralunga, Biella, Italy. www.serralunga.com **CIRCLE 222**





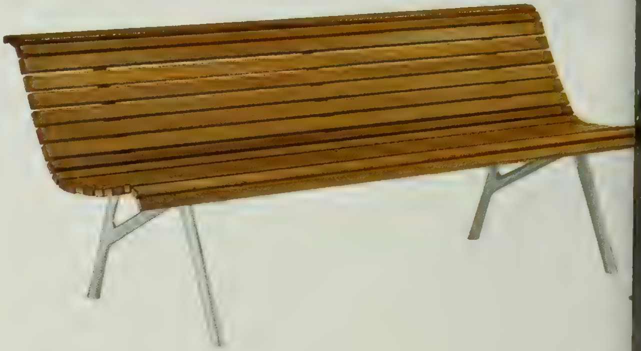
◄ Tying the knot



Danskina art director and renowned textile designer Ulf Moritz created four new contemporary designs for the Dutch collection. Danskina's introductions included innovative rugs made from linen, felt, pure wool, and strong paper in countless color combinations. The boldest of the designs, Knot, is an outdoor rug made entirely of polypropylene. The hand-knotted rug is available in four colors. Danskina, Amsterdam. www.danskina.nl **CIRCLE 225**

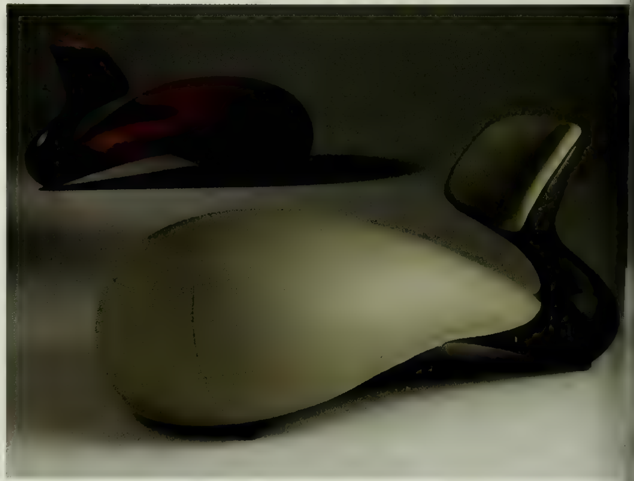
▼ A bench for Milan

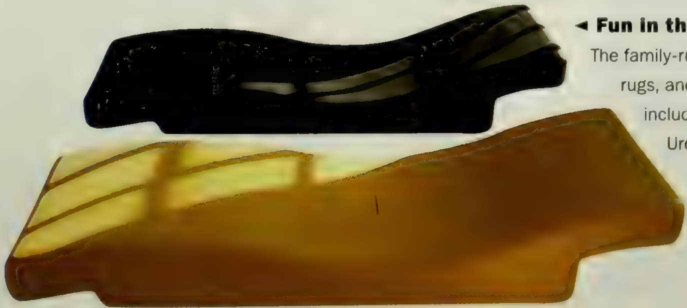
In 2005, Italy's Urban Land Institute (ULI) invited six leading Italian designers to participate in a competition to create a new bench for the city of Milan. Alias hooked up with its longtime collaborator Alberto Meda for the competition and has now put its entry into production. For Setes, Meda chose a design typology familiar to the Milanese urban landscape, but reinterpreted it using new technology. The structure is made of pressure-cast aluminum treated for outdoor use, with the slats of the back and seat made from teak. Alias, Bergamo, Italy. www.aliasdesign.it **CIRCLE 223**



▼ Whale ride

As an alternative to the rigid geometries and hard surfaces such as wood, stone, or plastic that characterize most outdoor furnishings, quirky Dutch furniture line Leolux presented Beluga. The organically shaped chaise, composed of a strong, lightweight plastic for easy moving, features a weather-resistant coating. Created by the young Dutch design pair Christiaan Oppewal and Silvijn van der Velden, Beluga is also available in an indoor version that can be upholstered in fabric or leather. Leolux, Utrecht, The Netherlands. www.leolux.com **CIRCLE 224**





◄ Fun in the sun

The family-run Spanish company Gandia Blasco produces indoor and outdoor furniture, rugs, and textiles. This year, its presentation at the popular off-site venue Superstudio included a number of new items, including several by Spanish designer Patricia Urquiola. 356 (left), designed by Pablo Girones and Jose A. Gandia, is a collection of sinuous sun loungers with side table, all made of rotationally molded polyethylene. Available in a range of colors. Gandia Blasco, Valencia, Spain. www.gandiablasco.com **CIRCLE 226**

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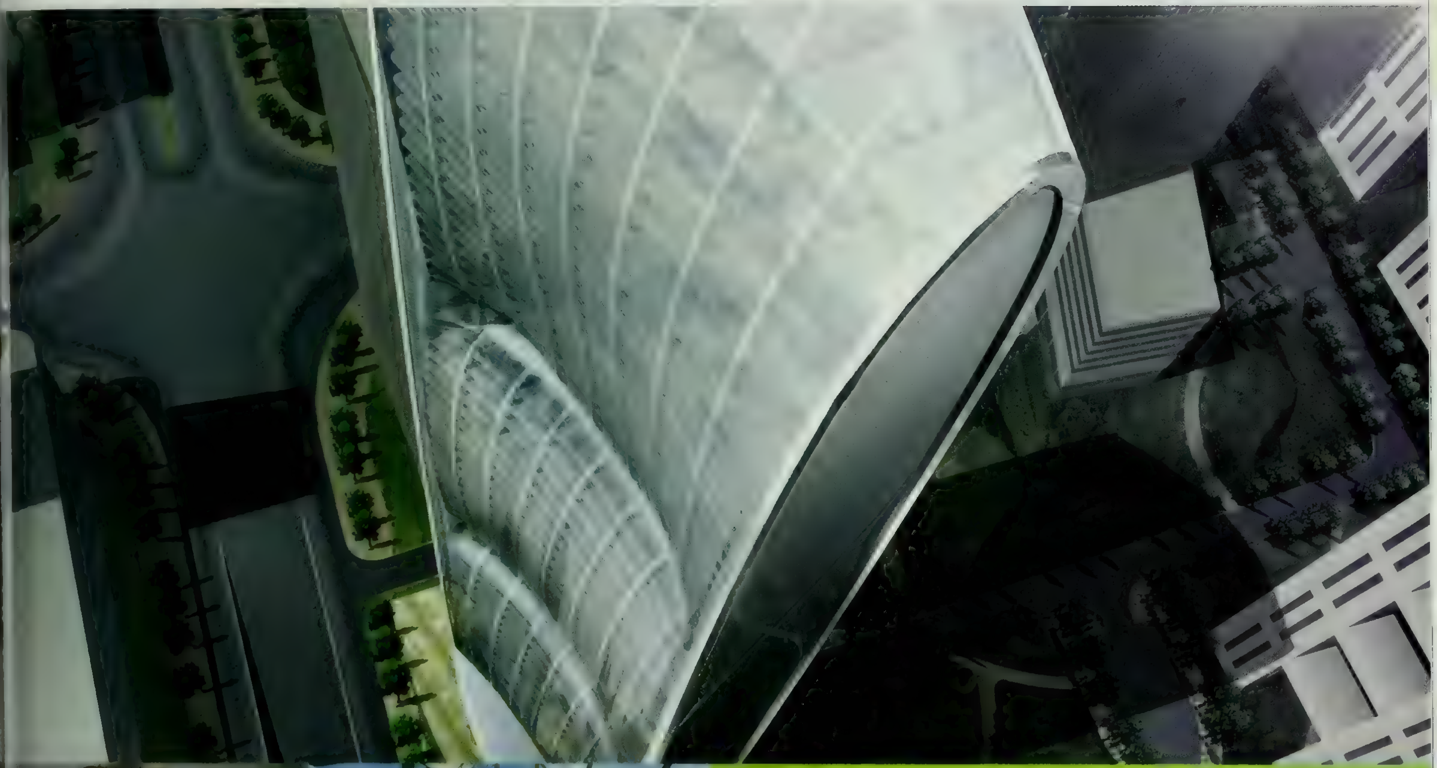

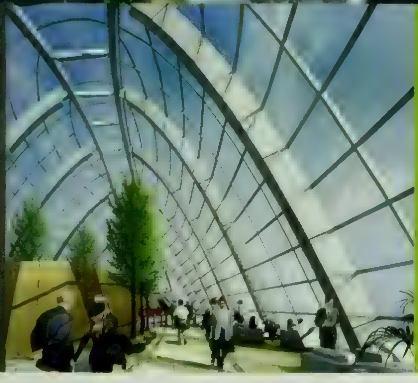

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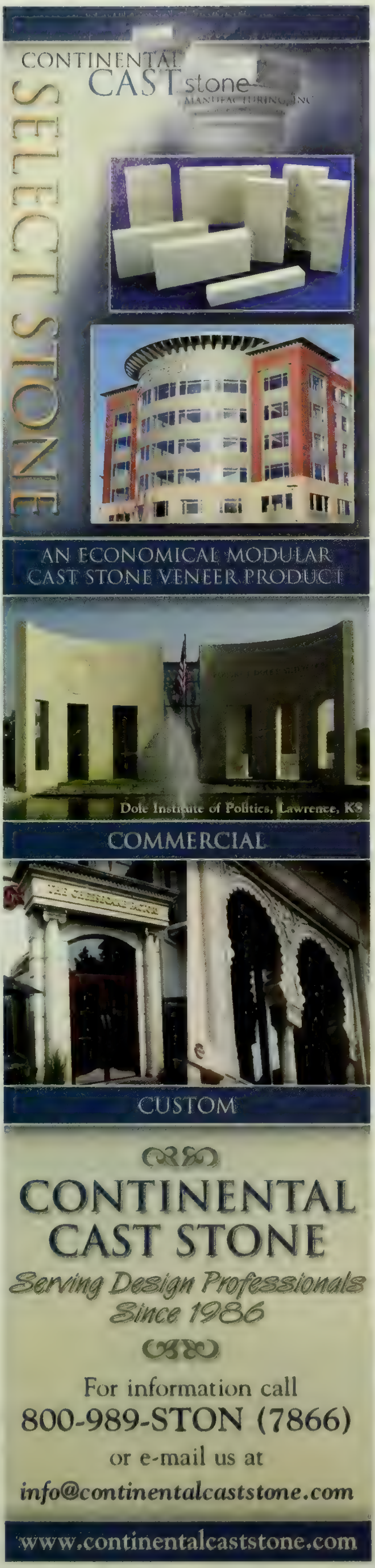

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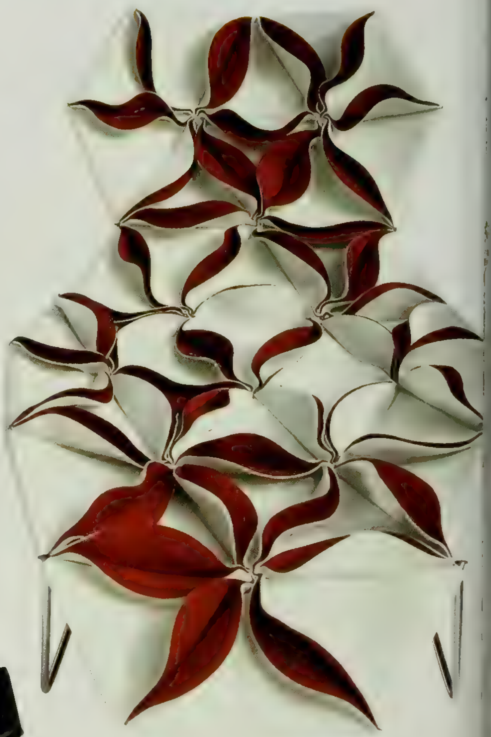
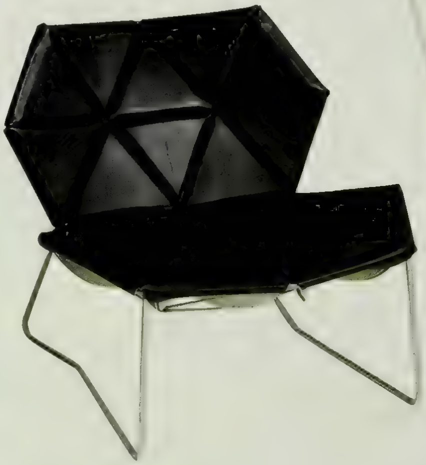
Product Briefs Milan: Leather Goods

► ▼ Floral arrangement

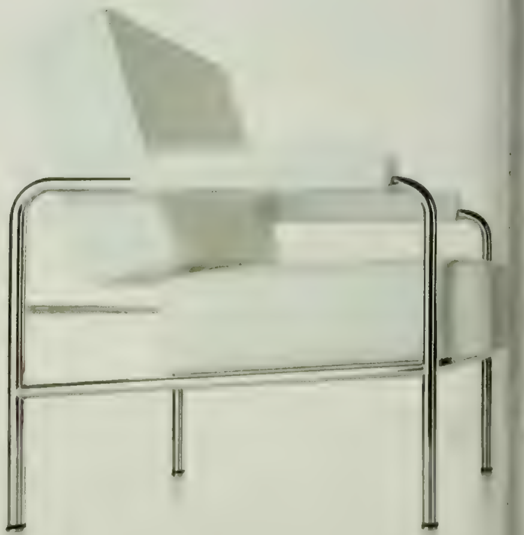
Moroso made its presence felt throughout Milan, with products and exhibits scattered around the city. Its presentation at the fairgrounds took place in a dizzying booth where boldly patterned bands hanging from the ceiling shifted up and down. Within the commotion, Moroso showed new works by the likes of Konstantin Grcic, Ross Lovegrove, and Tord Boontje. Patricia Urquiola designed several new seating ranges, including Antibodi, a lounge chair whose cover, fixed to a painted or chrome-plated metal frame, is created from triangular-shaped petals sewn together in combinations of felt, wool, and leather (shown). The petals can either face down for a quilted look, or up for an unconventional version. Moroso, Milan. www.moroso.it **CIRCLE 227**





► Thank you for smoking

Le Corbusier's designs were on display in two prominent exhibits at the Salone this year, including a reconstruction of the interior and furnishings of the Cabanon, the holiday hut Corbu built in Cap-Martin in 1952. Inside Cassina's showroom, five new additions to Cassina's I Maestri collection were displayed alongside original articles on loan from the Le Corbusier Foundation. The design for Wagon Fumoir (right) was created by Le Corbusier in 1931 for the smoking carriages of the French railways. In keeping with Corbu's original drawings, the upholstered elements, seat and back, are not fastened down to the support structure, but allow for a flexible back. Cassina, Milan. www.cassina.com **CIRCLE 228**



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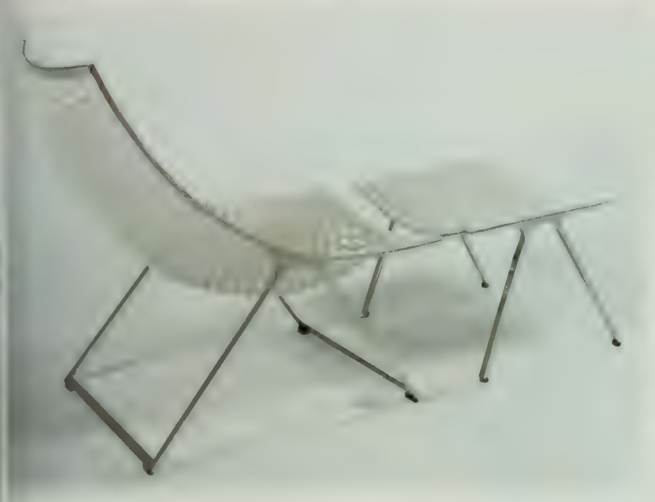
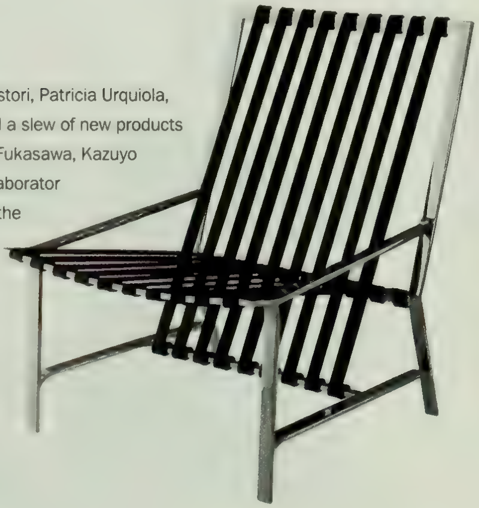
Haute hammock

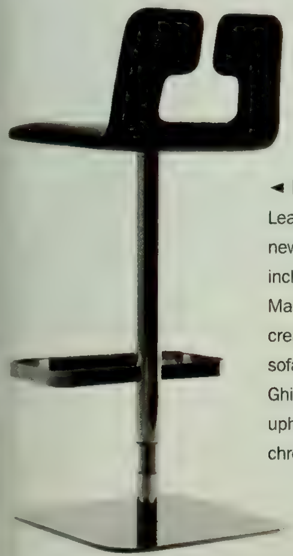
ith Loom (below), Franco Poli's new design for Matteo Grassi, a 2D surface takes on a 3D ergonomic shape anks to a carefully cut pattern of openings. The thick coach hide is incised using a high-frequency machine, giving the leather elasticity, breathability, and transparency, properties normally associated with fabric. The leather net, which is sewn and finished by hand, remains inside a continuous stainless-steel frame. Loom is available as a high or low lounge chair with footrest. Matteo Grassi, Milan. www.matteograssi.it **CIRCLE 229**



Strapping appearance

ddition to introductions by Ron Arad, Antonia Astori, Patricia Urquiola, d Philippe Starck, Driade's presentation included a slew of new products n a threesome of Japanese designers—Naoto Fukasawa, Kazuyo ima, and Tokujin Yoshioka. Frequent Driade collaborator hioka, whose designs for the company include the msical Tokyo-Pop family of products, this year tributed two lightweight chairs. In Ori (shown ight), the seat and backrest are composed of rlocking strips of black leather. The polished el frame provides an extra-wide seat. Driade, an. www.driade.com **CIRCLE 230**





◂ Padded perch

Leaders in leather-upholstered furnishings, Poltrona Frau presented new products as well as reintroductions from a long list of top designers, including Claudio Silvestrin, Enzo Mari, Achille Castiglioni, Lella and Massimo Vignelli, and French designer Jean-Marie Massaud, who also created Frau's booth this year. Among the impressive beds, chairs, and sofas was a curious stool, dubbed Alo (left), designed by Massimo Iosa Ghini. It is composed of a shell in multilayer curved wood, whose leather-upholstered padding features piping around the edge. The frame is chrome-plated steel. Poltrona Frau, Milan. www.poltronafrau.it **CIRCLE 231**

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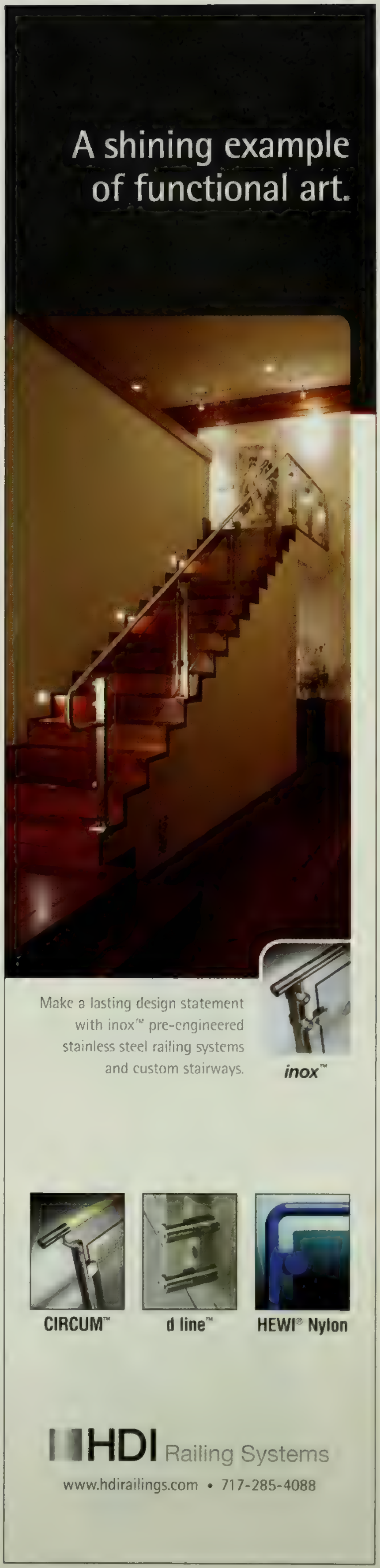

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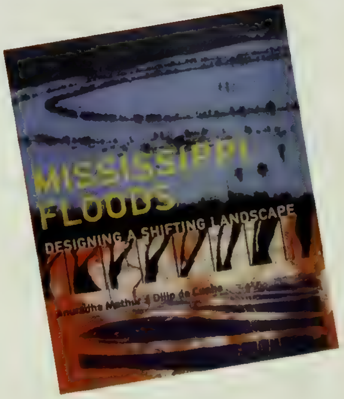
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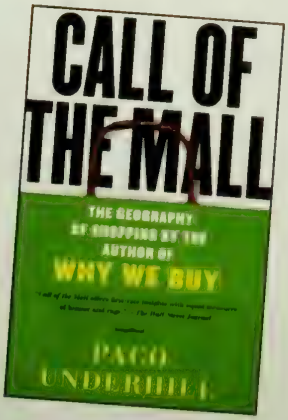

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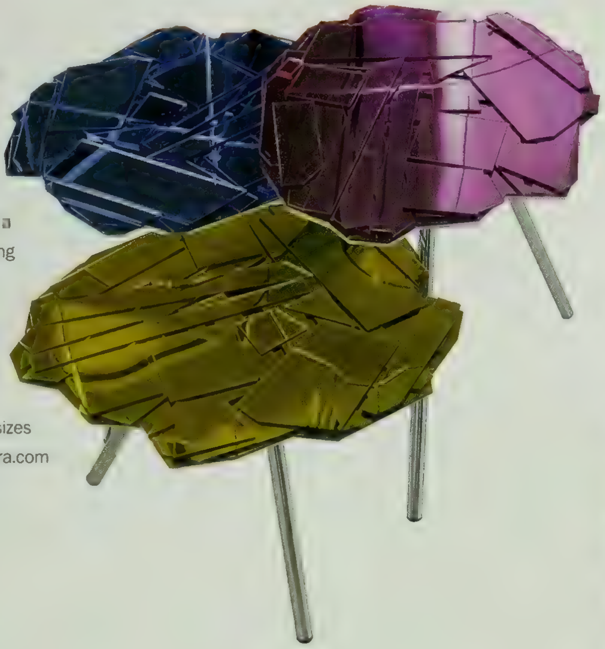
Product Briefs Milan: Work & Play

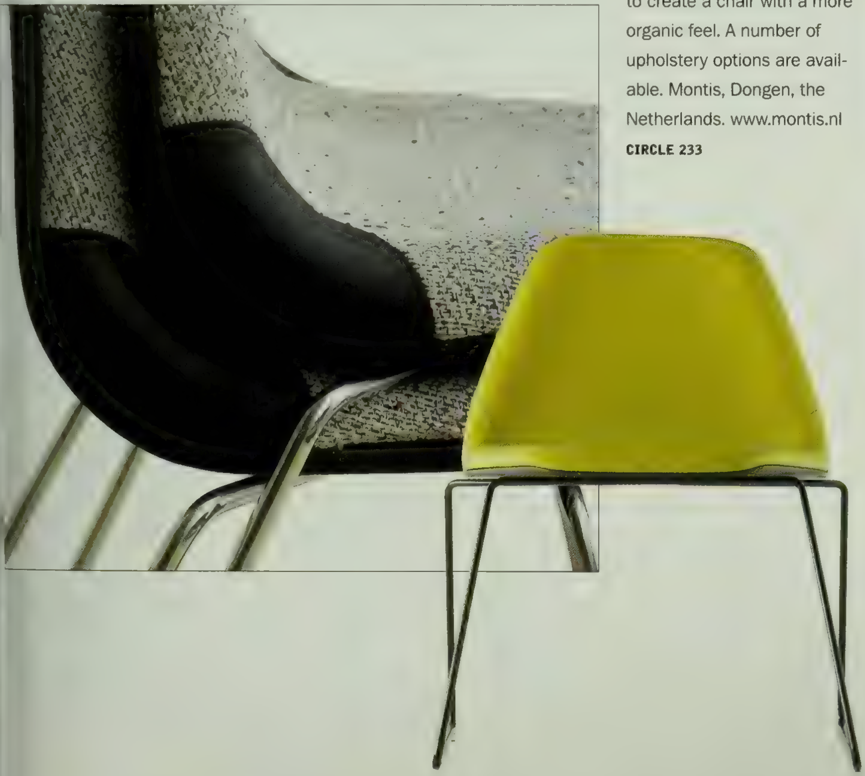
Shimmering shards

vant-garde Italian furniture line Edra
ontinues to rely on Brazilian
others Fernando and Humberto
ampana to produce their biggest
owd pleasers. In past years, the
ir has had enormous success with a
ries of chairs, each more astonishing
an the last, made from the most
likely materials. This year, instead
twisted wire or scraps of wood,
e brothers chose to incorporate
lorful shards of glass into a med-
/ of tables in different heights and sizes
ght). Edra, Perignano, Italy. www.edra.com
RCLE 232



A gem of a chair

ung Belgian designer Alain Berteau made his debut for leading Dutch furniture line Montis this year with
by, a simple but handsome chair (below). Ruby's hexagonal shape offers a wide seat and a frame base that
oth linkable to other chairs and stackable. The molded foam pad, however, softens the geometric features
to create a chair with a more organic feel. A number of upholstery options are available. Montis, Dongen, the Netherlands. www.montis.nl
CIRCLE 233



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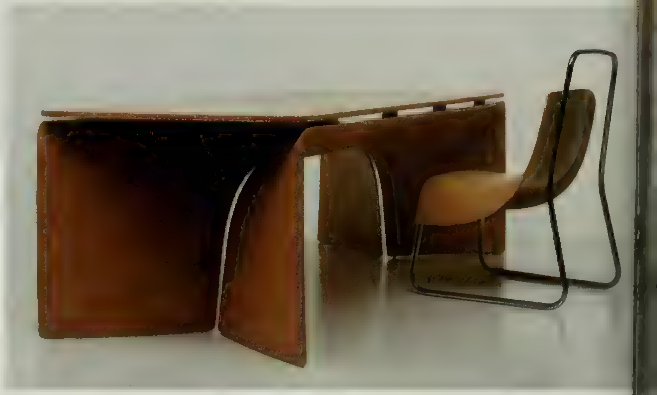
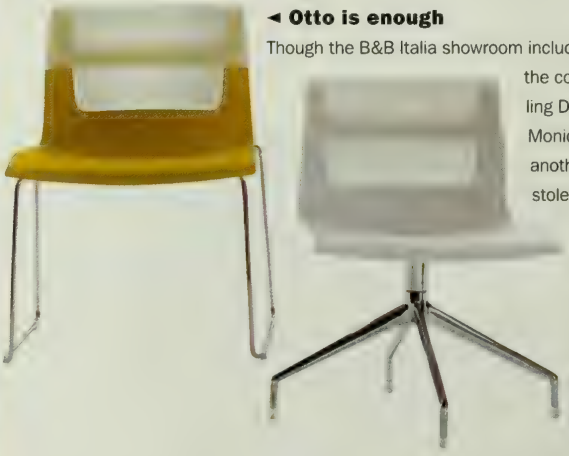
Product Briefs Milan: Work & Play

► Structural gymnastics



Baleri Italia's sculptural Big Bend table and Little Big chair (right) create an arresting visual impact. The table is composed of two identical sheets of curved multi-plywood that form unusual table legs while skillfully avoiding the legs of those seated around it. When joined to the matching tabletop, these three elements form a strong, hollow beam without the need for further reinforcing. The curved plywood of the chair, on the other hand, is connected to its tubular steel structure only at the front, thanks to an innovative 3D curving technology. The chair is available with or without padding. Baleri Italia, Bergamo, Italy. www.baleri-italia.it **CIRCLE 234**

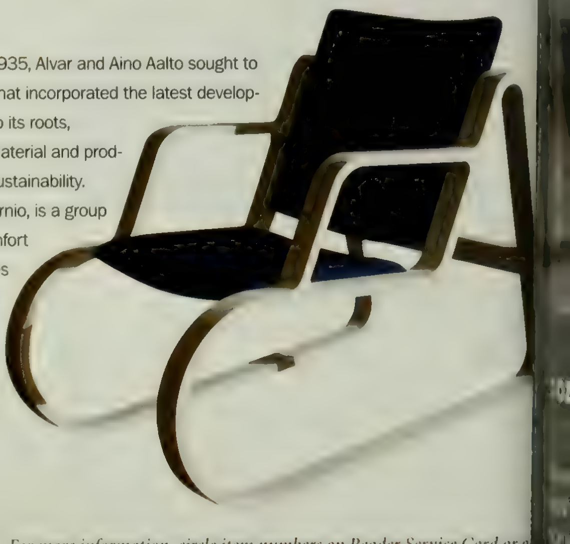


◄ Otto is enough

Though the B&B Italia showroom included several Moooi pieces in recognition o the company's recent investment in the fledgling Dutch furniture line, it was the inclusion o Monica Armani's tables and office furniture, another of B&B's recent acquisitions, that rea stole the show[room]. In addition, its most pr lific designer, Antonio Citterio, together with frequent collaborator Toan Nguyen presented Otto, a series of office chair where the molding of bicomponent pla tic materials creates a backrest with different degrees of flexibility and transparency (left). B&B Italia USA, New Yor City. www.bebitalia.it **CIRCLE 235**

► Cartoon figure

Among the founders of Finnish line Artek in 1935, Alvar and Aino Aalto sought to promote progressive living through furniture that incorporated the latest developments in design. This year, Artek went back to its roots, presenting functional pieces that exemplify material and product innovation, with an added emphasis on sustainability. Woodline, by frequent Artek designer Eero Aarnio, is a group of flat-cut furniture pieces (right) with the comfort of upholstered seating. The technique provides great flexibility to customize chairs and sofas according to the needs of spaces and users, while the cartoonish lines suggest it's not intended to be taken too seriously. Artek, Helsinki, Finland. www.artek.fi **CIRCLE 236**



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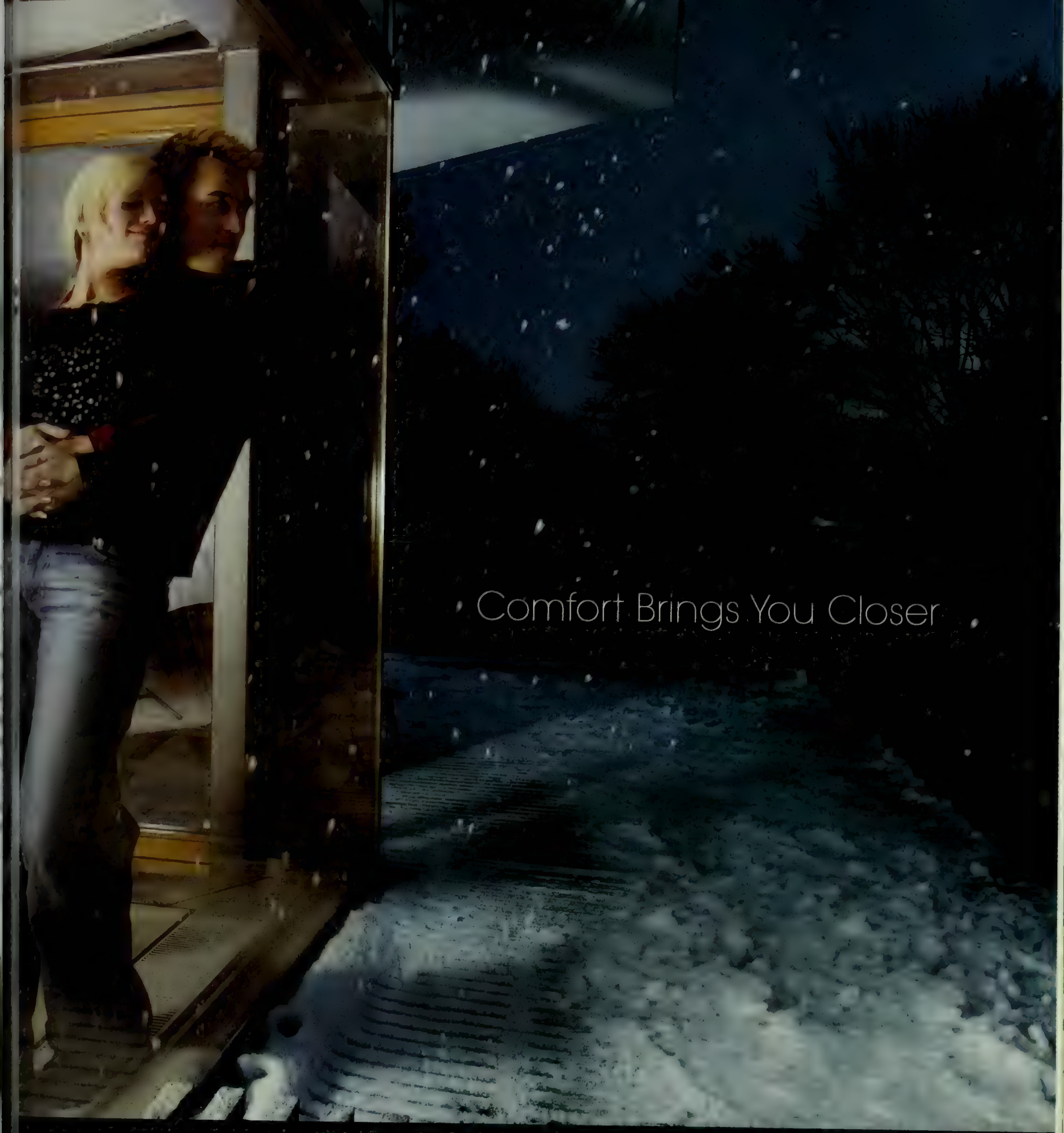

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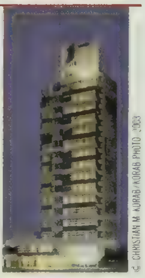
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This exhibition features more than 100 drawings, models, photographs, documents, building components, and furnishings that illuminate how Wright's dream materialized in Bartlesville, Oklahoma. Now refurbished and remodeled, the landmark is home to Price Tower Arts Center and a boutique hotel. *Prairie Skyscraper* is presented in honor of the 50th anniversary of this remarkable building.

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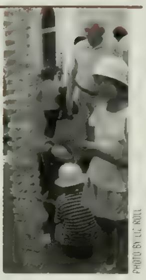
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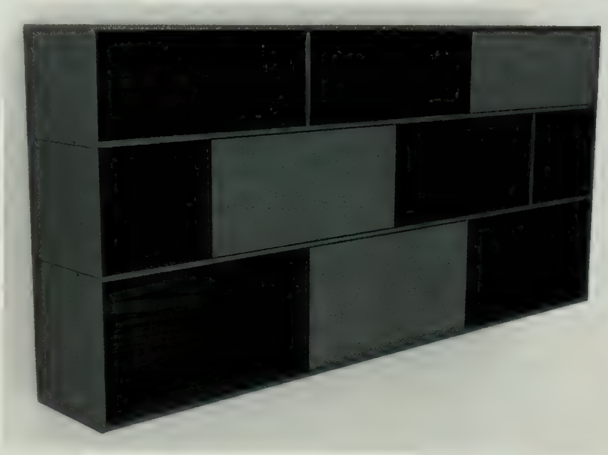
Product Briefs Milan: Work & Play

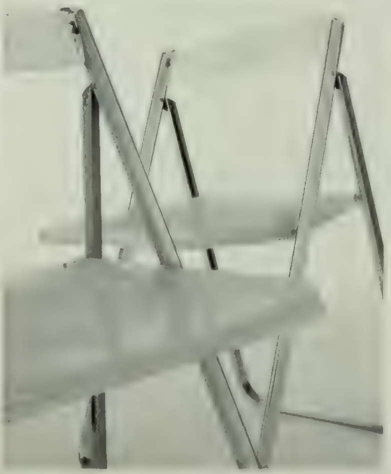
▼ Concrete evidence

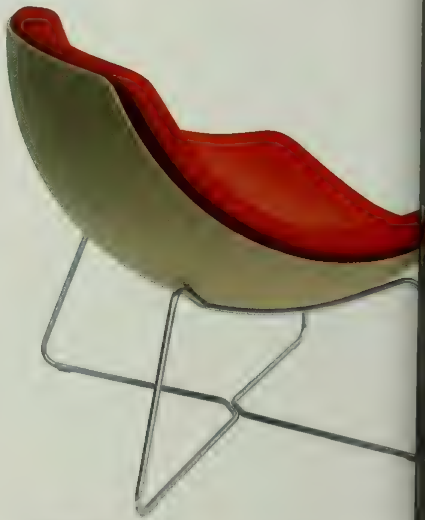
Last year's Salone del Mobile saw the international launch of Established & Sons, the London-based line that promotes British design. Just one year later, the company put together one of the largest and most impressive presentations in Milan. Among the tables, chairs, lighting, and storage units on display—both mass-produced and limited edition—was a deceivingly mundane shelving unit. Concrete Shuttering (left), by Sebastian Wrong, features a wall-mounted unit made from concrete that ha been cast in wooden shutters, giving the panels and sliding doors their distinctive, raw wood grain. Steel rods reinforce the lightweight concrete frame. Established & Sons, London. www.establishedandsons.com **CIRCLE 237**



▼ Veteran brigade

Kartell displayed a retrospective of objects from its celebrated collection as well as pieces from its newest designers, such as Ronan and Erwan Bouroullec. That work, however, was overshadowed by Kartell veterans Antonio Citterio, Piero Lissoni, and Alberto Meda, who continue to produce the company's most innovative products. Meda's Honeycomb (below) is a transparent folding chair whose simple lines contrast with its textured body. The hexagonal structure of its technopolymer seat and back, combined with its aluminum frame, provide the lightness required of a folding chair. Kartell USA, New York City. www.kartell.it **CIRCLE 238**





▲ The OC

Seeking an occasional chair that would be appropria for both residential and contract interiors, Italian furn ture line La Palma turned to British designer Simon Pengelly. The result was the OC chair (above), where the shape of the molded wood seat shell is nestled pe fectly within the top curves of the stainless-steel wire base. The inherent flex and the foam padding of the shell provide exceptional comfort. The shell is availab in several finishes, with a choice of fabric. It measure 31" wide x 29" high x 32" deep with a 15" seat heigh La Palma, Cadoneghe, Italy. www.lapalma.it **CIRCLE 23**

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Product Resource: Literature

ew luminaire catalog

accompany the expansion of its M-eries linear fluorescent luminaire line, ELUX is publishing an updated *M-Series ecification Guide*. The new catalog cludes cross-referencing tables of con-nts and a step-by-step guide to make ecifications easier. SELUX, Highland, N.Y. vw.selux.com/usa **CIRCLE 240**

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stainability report

vorth, designer and manufacturer ıdaptable workspaces, is the first erican office furniture company to ie a *Global Reporting Initiative tainability Report*. The report ails long-term sustainability objec-s and current results and acts as ueprint for the company's future. vorth, Holland, Mich. v.haworth.com **CIRCLE 242**

oks for the bathroom

National Kitchen & Bath Association has recently published the *Professional ource Library*, a nine volume series on the design and construction of kitchens and baths. The comprehensive series caters to a wide range of professional and editorial needs. National Kitchen & Bath Association, Hackettstown, N.J. www.nkba.org **CIRCLE 243**

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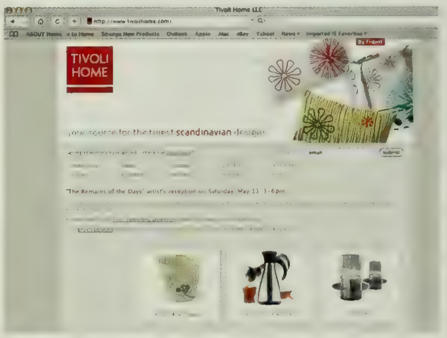
Product Resource: On the Web

www.cersaie.it

The new Web site for the Cersaie international bath and tile exhibition is personalized and easy to use. Particularly noteworthy are its password-protected sections for exhibitors and its database of exhibitor contact info, which includes an address-booklike "Agenda" for the user to customize.

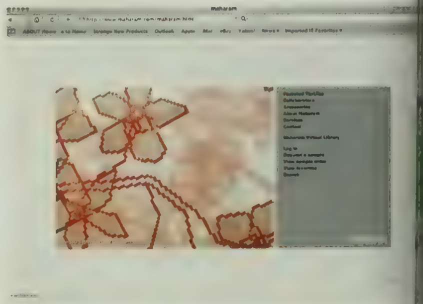
www.tivolihome.com

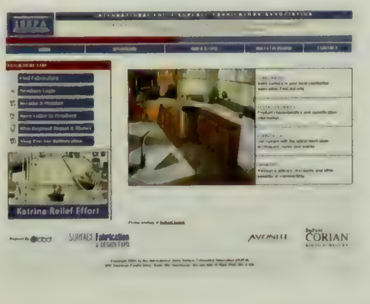
Run by two Danes who want to share their passion for Scandinavian design, Tivoli Home showcases a wide range of elegant objects for the home. Most of the products are works by current designers, but the occasional classic is included as well. The Web site displays images and information on each product, including the designer, year, and country of origin.



www.maharam.com

This award-winning Web site takes patience to navigate, but the reward is a stunning, frame-by-frame presentation of textile designs. Particularly enjoyable is the section featuring pillow designs. The site also includes options to save items to a favorites list and a virtual library with access to a complete set of Maharam's sample books.





www.issfa.org

The new Web site for the International Solid Surface Fabricators Association includes everything you ever wanted to know about solid surface materia The Web site has sections for consumers, fabricators, and trad specifiers and features a bulletin board for member discussions.

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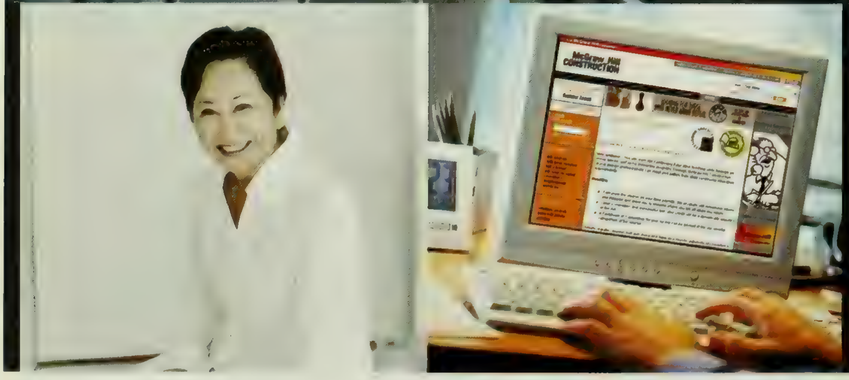

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Dates & Events

lew & Upcoming xhibitions

ıe Musée d'Art Moderne
rand-Duc Jean—Mudam
ıxembourg
ɔens July 1, 2006

ıdam is the first contemporary art museum in xembourg. The building is the work of Leoh ng Pei and sits in perfect harmony within the rk, planned by Michel Desvigne, on the Fort uengen site. Its layout follows the old fortifica- n walls of Fort Thuengen and is characterized great banks of windows and finishing touches honey-colored limestone. The building houses auditorium, a gift shop, and cafeteria, as well expansive gallery space. For more information l 352 45 37 85 30 or visit www.mudam.lu.

an Prouvé—The Poetics of
chnical Objects
ɜil am Rhein, Germany
ɒtember 23, 2006–March 25, 2007

s is the first comprehensive and systematic veling exhibition of furniture and architecture veloped and produced by Jean Prouvé 01–1984) from 1924 until the mid-1970s. Its atorial concept, developed by guest-curator fessor Bruno Reichlin, is structured along uvé's own ideas, explained in the famous ırses he gave at the Paris Conservatoire ional des Arts et Métiers (CNAM) between 57 and 1970. The exhibition contains approxi- tely 50 original pieces of furniture, 10 original hitectural units (including a complete "Maison Sinistrés"), and numerous architectural mod- as well as photographs and reproductions of uvé's architecture- and furniture-related wings. At Vitra Design Museum. For more rmation, call 49 76 21 702 3200 or visit w.design-museum.de.

ngoing Exhibitions

rphosis
ls
ough July 17, 2006

een projects (layouts, drawings, photographs, from Morphosis, currently involved in the con- ction of numerous buildings, are on view to vey the idea of architecture as "in the act." ɜens and Web cams open windows onto buildings in operation or sites under way in order to follow their evolution. At Centre Pompidou. For more information, visit www.cnac-gp.fr/pompidou.

Vaults of Heaven:
Sanctuaries of Byzantium
New York City
Through July 28, 2006

An exhibition of 30 large-format color photographs of some of the greatest examples of Byzantine architecture. Captured by the renowned Turkish photographer and architect Ahmet Ertug, the striking images reveal in astonishing detail the extraordinary churches and sanctuaries of ancient Byzantium. At the World Monuments Fund Gallery. For additional information, call 646/424-9594 or visit www.wmf.org.

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Dates & Events

Newer Orleans—
A Shared Space
Washington, D.C.
Through July 30, 2006
In response to the need to rebuild New Orleans, the Netherlands Architecture Institute (NAI) and the Tulane School of Architecture, together with the magazine *Artforum*, invited six architecture firms from the Netherlands and the United States to reenvision shared spaces and symbols for the city. Their proposals consider a future for the city in which architecture serves to create a new sense of social commitment, political involvement, and engagement with the landscape. The Dutch firms are MVRDV, UN Studio, and West 8; Morphosis, Hargreaves Associates, and Huff + Gooden Architects represent the U.S. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Alvaro Siza/Architect:
Drawings, Models,
Photographs
Santa Monica, Calif.
Through August 19, 2006
The first museum survey in the United States to explore the distinguished 50-year career of Portuguese architect and Pritzker Prize–winner Alvaro Joaquim de Meio Siza Vieira. The exhibition's drawings, models, and photographs illustrate the attention to spatial relationships, sensitivity to material and texture, and use of light as an expressive and active element. At the Santa Monica Museum of Art. Call 310/586-6488 or visit www.smmoa.org.

From Wood to Architecture:
Recent Designs from Finland
New York City
Through August 25, 2006
This exhibition takes a fresh look at the possibilities offered by the oldest of building materials: wood. Organized by the Museum of Finnish Architecture, the exhibition explores the current resurgence of wood as a building material. The show presents 17 recently constructed buildings in Finland, ranging from cultural centers to summer cottages to churches. The architects include established, internationally known figures such as Kristian Gullichsen, Mikko Heikkinen, and Markku Komonen, as well as a new generation of young designers, including Anssi Lassila and Ville Hara. At Scandinavia House: The Nordic Center in America. For more information, call 212/879-9779 or visit www.scandinaviahouse.org.

Prairie Skyscraper: Frank
Lloyd Wright's Price Tower
Washington, D.C.
Through September 17, 2006
Organized by Price Tower Arts Center (Bartlesville, Oklahoma) in cooperation with The Frank Lloyd Wright Foundation (Scottsdale, Arizona), Prairie Skyscraper will present for the first time a comprehensive selection of the Arts Center's collection of historic artworks and objects relating to the Price Tower, including never-before-exhibited Wright documents and drawings from its own holdings and from those of the Wright Foundation's archives. At the National Building Museum. For mor information, call 202/272-2448 or visit www.nbm.org.

Artist's Choice:
Herzog & de Meuron
New York City
Through September 25, 2006
The 7th exhibition in MoMA's Artist' Choice series, in which contemporary artists are invited to select, juxtapose, and comment on works from the museum's collection. Drawing from across the museum' departmental collections, the internationally renowned architects Jacques Herzog and Pierre de Meuron approach the collection n as conventional curators, but as

rchitects. At the Museum of lodern Art. Call 212/708-9400 or sit www.moma.org.

est of Friends: Buckminster
uller and Isamu Noguchi
ong Island City, N.Y.

rough October 15, 2006

e relationship between Noguchi d visionary designer and inventor ckminster Fuller are illuminated this special exhibition, which cludes models, sculptures, draw- gs, photographs, film footage, d letters. At the Noguchi useum. Call 718-204-7088 or sit www.noguchi.org.

aha Hadid
w York City

rough October 25, 2006

e first woman to be awarded the stinguished Pritzker Architecture ize, which she won in 2004, did is internationally known for th her theoretical and academic rk, as well as a portfolio of ilt projects that have literally ifted the geometry of buildings." is exhibition will provide a com- hensive look at her projects rldwide. True to Hadid's interdis- linary approach to architecture, re is a wide range of mediums display, including painting, wing, large-scale urban plans, posals for international design mpetitions, building designs contemporary cultural and rts facilities, and documenta- of current projects under struction. At the Solomon R. ggenheim Museum. Call 2/423-3500 or visit w.guggenheim.org.

ntilever-Chairs:
chitectural Manifesto and
terial Experiment
nna

ough October 29, 2006

Cantilever-Chair represents one he most significant products of nt-garde design in the 1920s. se steel-tube chairs stem from the Bauhaus movement and the German Werkbund, and still challenge architects and designers today to experiment anew with their form and material. The exhibition covers more than 80 years of innovative suspension design with chairs by Marcel Breuer and Ludwig Mies van der Rohe, right up to Tom Dixon and Ross Lovegrove. In the MAK Study Collection Rooms. Visit www.mak.at.

Seattle Architecture
Foundation Tours
Seattle

Through October 28, 2006

Seattle Architecture Foundation connects people to architecture through popular guided walking tours, exhibitions, youth programs, and public forums—programs that inspire participants to engage in shaping their community. Visit www.seattlearchitecture.org.

Lectures, Conferences, and Symposia

Melbourne Design Festival
Melbourne

July 6–16, 2006

In 2006, the Melbourne Design Festival theme, "Get Set to Glow," will be reflected across over 50 events. Some festival events in 2006 include: the new design show, *Under Capricorn*; the ever-popular design market, ReadyMadeMarket; an exhibition of nonarchitecture by Denton Corker Marshall; and the 50th-anniversary of *Design Icon*, an exhibition from the U.S. on the design practice of Ray and Charles Eames. At Federation Square and venues throughout Melbourne. Visit www.nationaldesigncentre.com.au.

Film: The Case Study House
Program
Washington, D.C.

July 8, 2006

The film *The Case Study House*

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Program, 1945–1966: An Anecdotal History & Commentary, produced by The Museum of Contemporary Art in L.A. (1989, 58 min.), documents the designs for 36 experimental modern prototypes for housing commissioned by the magazine *Arts and Architecture* in response to the housing shortage following World War II. Some of the most important architects of the Southern California region were involved in this project, including Richard Neutra and Charles and Ray Eames. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

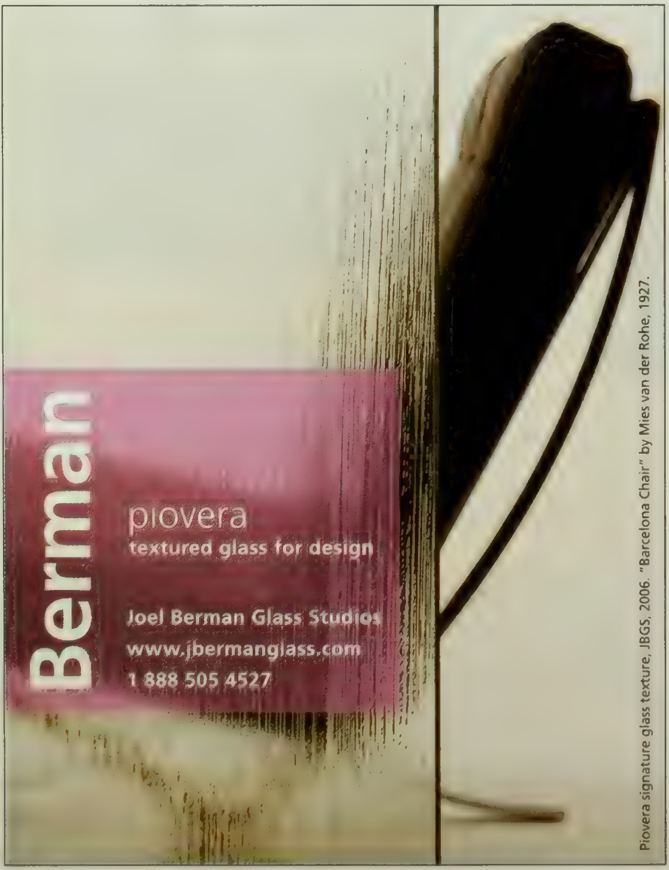
Film: Louis I. Kahn: An Offering to Architecture
Washington, D.C.
July 16, 2006
The 20th-century American architect Louis I. Kahn was known for his monumental forms that used the simple geometry of squares, circles, and triangles. This film (1992, 58 min.) focuses on Kahn's mature work, and the talent and character that created his famous architecture. The film is narrated by Kahn himself, using audio recordings of the many talks he gave around the world. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

ARE Seminar
Los Angeles
July 19 and 26, 2006
This seminar covers electrical systems with Russ Givens of RE Wall Associates. At the AIA/LA Chapter Office. Visit www.aialosangeles.org.

AIA DesignDC Conference and Expo
Washington, D.C.
July 19–21, 2006
The second annual Conference and Expo is designed specifically for architects, designers, engineers, and contractors with two-and-a-half days of the very latest in design trends, construction techniques and materials, and new technologies from numerous national exhibitors. At the Ronald Reagan Building and International Trade Center. Visit www.aiadesigndc.org.

Spotlight on Design: Stefan Behnisch
Washington, D.C.
July 20, 2006
Earlier this year, Harvard University announced the selection of the German architecture firm Behnisch Architects as the designer for the Harvard Stem Cell Institute on the University's Allston campus. The co-founding principal and lead designer for the project, Stefan Behnisch, will discuss the studio's environmentally friendly "green" building designs, including the Allston project, which is the second major commission in the United States for the Stuttgart-based firm. For the Genzyme Corporation's headquarters in Cambridge, Massachusetts, Behnisch Architects was awarded a Platinum LEED rating, the highest environmental rating from the U.S. Green Building Council. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Julius Shulman, Modernity and the Metropolis
Washington, D.C.
July 26, 2006
In a career that spans more than 70 years, renowned architectural photographer Julius Shulman continues to document Modern architecture and the development of the Los Angeles region. The exhibition *Julius Shulman, Modernity and the Metropolis* honors the 95th birthday and life's work of Shulman and includes original prints selected from his work, which was recently acquired by the Getty Research Institute. In this special appearance Julius Shulman will be joined by Win de Witt, curator of architectural collections and Christopher Alexander,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oung Architects Forum os Angeles

ly 27, 2006
new beginnings panel. the loca-
n is to be determined. Visit
w.aialosangeles.org for further
formation.

ompetitions

e Craftsman's Challenge 006: The Search for the olden Touch

eadline: July 15, 2006
neer Tech's competition
ns to recognize excellence in
odwork and architectural
odwork that features natural
gebanding applications. Awards
l be officially announced in
gust at the International Woodworking Fair (IWF) in Atlanta. Call 800/593-5601 or visit www.veneertech.com.

A Bridge Museum

Deadline: July 17, 2006
This architectural contest promoted by Arquitectum seeks design entries for a new bridge to replace the Academy Bridge in Venice, Italy. The structure is intended to become a city museum as well as a connecting bridge and entry to the Rio Alto. Visit www.arquitectum.com.

Juried Photo Exhibits at Build Boston

Deadline: August 1, 2006
All New England architects, landscape architects, and interior designers who are members of the AIA, ASID, ASLA, or IIDA are eligible. For more information, visit www.architects.org/awards.

Imagining Penn Center: A National Student Design Competition to Plan New Life for Philadelphia's Central Civic Space

Deadline: September 15, 2006
Penn Center is one of Center City Philadelphia's important spaces, housing Suburban Station, office towers, retail, and public plazas. Originally conceived by the late Edmund N. Bacon, Philadelphia's renowned former planning director, Penn Center changed the face of Philadelphia when it was built in the 1960s as one of the largest and most ambitious downtown redevelopments of its time. Today, Penn Center is vastly underutilized by the public, yet it holds great potential for revitalization. The Ed Bacon Foundation challenges students to imagine the site's potential and to generate ideas for restoring this important space as a modern Philadelphia epicenter and icon. For more information, visit www.edbacon.org/penncenter.

Fire Station Design Awards Program

Deadline: September 15, 2006
The Fire Industry Equipment Research Organization (FIERO), in conjunction with the International Association of Fire Chiefs (IAFC) and Fire-Rescue magazine, invites submissions for its awards program to encourage excellence in fire station design. The awards program is being held in as a part of FIERO's 5th National Symposium on Fire Station Design. For more information, visit www.fierofirestation.com.

The 2nd Annual JELD-WEN Student Door Design Contest

Deadline: To be Announced
Individuals are invited to create and submit original designs for residential front doors, focusing on the theme of "honoring architecture." The entry form and rules will be posted at www.jeld-wen.com/studentdesign. The contest concludes with the selection of winners in November 2006.

E-mail event and competition information two months in advance to elisabeth_broome@mcgraw-hill.com.

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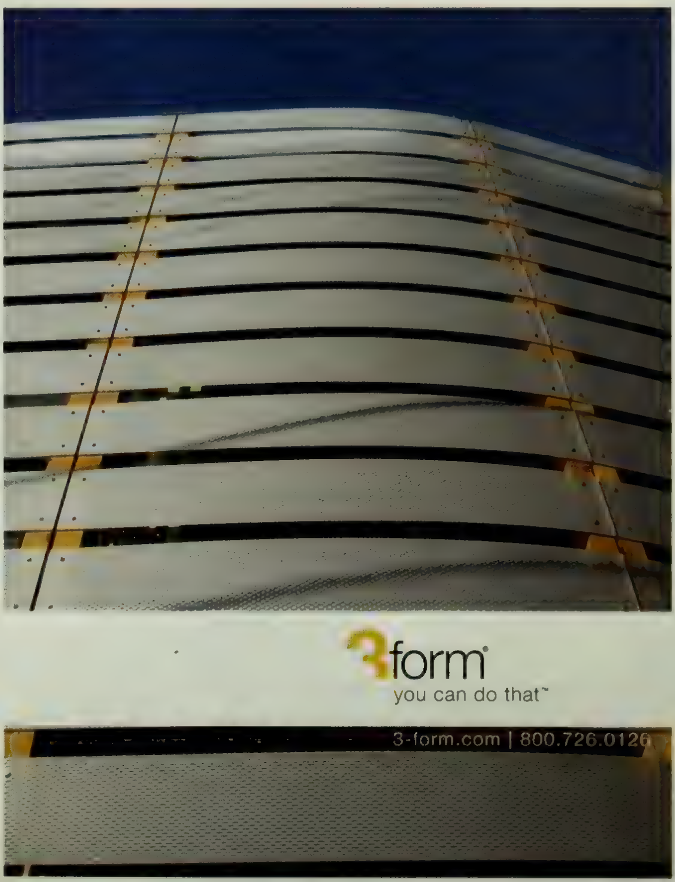
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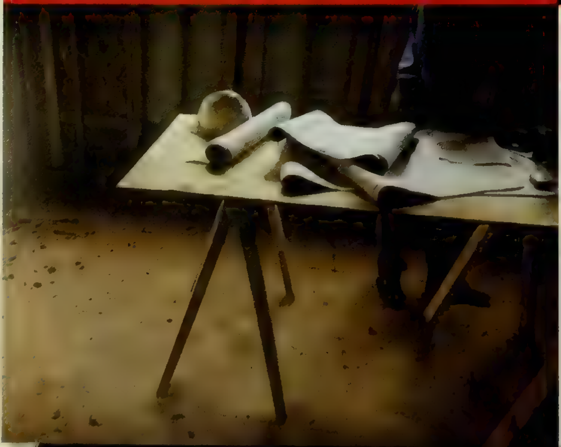

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3.	a	b	c	d	**8.**	a	b	c	d
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5.	a	b	c	d	**10.**	a	b	c	d

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3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

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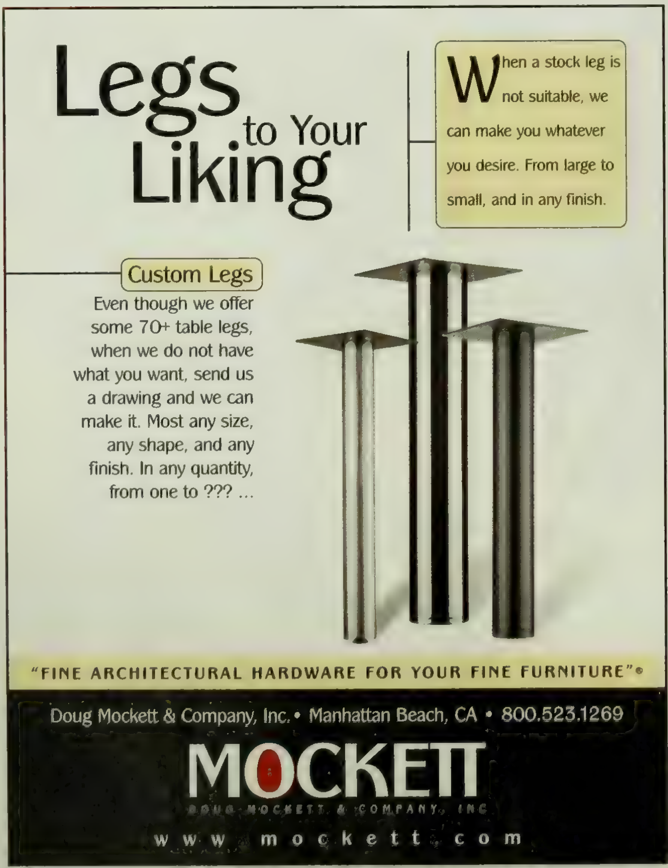
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Grasspave2 (right) has 100% grass coverage, 5721 psi compressive strength, 92% void space for the healthiest root zone, and is made from 100% recycled plastic. Gravelpave2 (not shown) is beautiful too!

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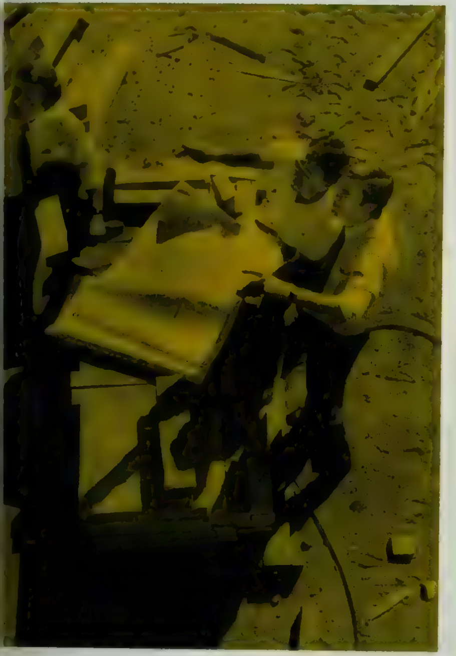
NOUNCING THE FIRST BIENNIAL AWARD OF THE

I. Donald Terner Prize

FOR **INNOVATION** AND **LEADERSHIP** IN AFFORDABLE HOUSING



Don't miss your chance to apply!

Recognizing successful and innovative affordable housing projects and their leadership teams, the I. Donald Terner Prize is being inaugurated to commemorate Don Terner on the tenth anniversary his death. One $25,000 prize will be awarded biennially to the affordable housing project and leadership team that best exemplifies the spirit of Don Terner's work, commitment to affordable housing, and practice principles.

First Prize Award $25,000
Five Finalists Awards $5,000

We are honored to announce our jury:

Elinor Bacon, *President, E.R. Bacon Development, LLC*

David Baker, *Principal, David Baker + Partners*

John King, *Urban Design and Architecture Reporter, San Francisco Chronicle*

Greg Maher, *Vice President & Deputy General Counsel, Local Initiatives Support Corporation*

J. Michael Pitchford, *President & CEO, Community Preservation & Development Corporation*

Geoffrey Wooding, *AIA, Principal, Goody Clancy*

An application may be submitted by anyone involved in the planning, development or operation of a project, but must include the approval of the original project sponsor, developer, and the architect. Eligible projects must be located in the United States, and have been in operation for a sufficient amount of time to demonstrate success.

Applications are due on September 18, 2006.

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rban Land Institute

ner Prize is administered by the
for Community Innovation at the
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For more information and an application go to
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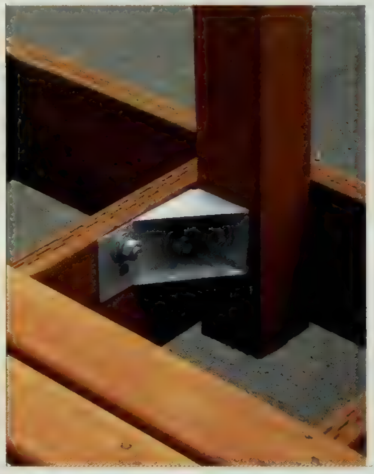
| Circle Reader Service #150

Strengthen Your Deck

DeckLok Bracket Systems



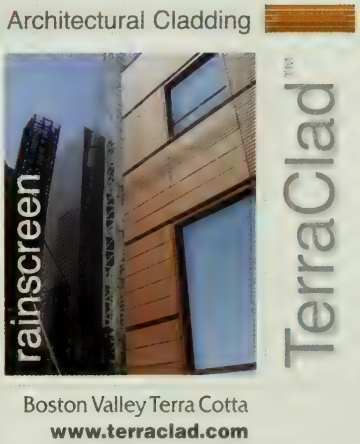
DeckLok is a patented bracket syste that secures all critical connections the deck—deck to building, stair ar railpost components to the deck. Sp DeckLok into your constructi designs to meet or exceed IRC 20 requirements. Up to 1500% strong deck connections. Code Complia HDG or Stainless Steel.

866-617-DECK (3325)
www.deck-lok.com

| Circle Reader Service #1

Green Architectural Cladding System

Boston Valley Terra Cotta



A "green" architectural cladding system delivers the advantages of rain screen performance while retaining the beauty and richness of terra cotta. TerraClad is produced in the U.S. at Boston Valley Terra Cotta Company's state of the art facilities. Available in colors, sizes and patterns to match the designer's imagination.

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www.bostonvalley.com

| Circle Reader Service #151

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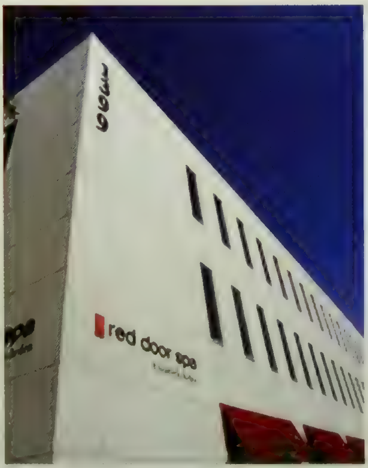
HEWI® nylon railing system: Add splash of color and a measure strength to your next project w nylon-coated railings. Virtually ma tenance free, HEWI® railings provi exceptional structural streng chemical resistance and hygie qualities. Choose tempered glass perforated metal infill, colored ny or solid wood handrails. Standard a custom designs available. Compl supply and installation service acc sible throughout North America. H railing systems include inox™, C CUM™, HEWI Nylon, and d line™.

www.hdirailings.com

| Circle Reader Service #

Thin Stone Cladding Systems

Thin Stone Systems, LLC



Thin lightweight natural stone wall cladding by THIN STONE SYSTEMS, LLC offers economical solutions for new construction and renovation, for both exterior and interior. Reinforced by a special patented process, the thin veneer panels of natural granite, marble, or limestone are applied to a structural framing system of extruded aluminum. Weighing only 6-lb. psf, the wall system provides many advantages including speed and simplicity of installation.

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O'Keeffe's Inc.

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Valeron Strength Films

Introducing the first non-directional draining water-resistive barrier. Unlike existing flat housewraps, Valéron Vortec™ with EVD Technology has a unique 3-D surface that allows drainage of water and moisture behind the exterior siding. The patent-pending crush-resistant pattern creates airspace between the siding and Vortec's surface reducing the chance of mold.

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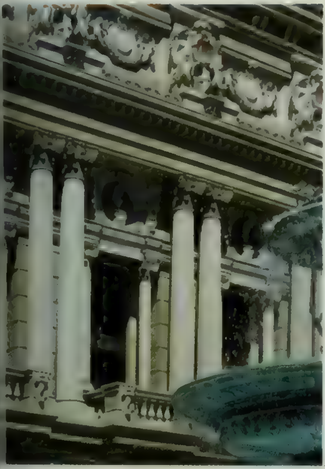
| Circle Reader Service #159

olumns, Balustrades and Cornices

lton Classics, Inc.



Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, mouldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers maintenance-free balustrade products ideal for any application.

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www.meltonclassics.com

| Circle Reader Service #157

Fire-Rated Aluminum Products

Aluflam North America

Imagine being able to specify a fire-rated system that looks so good you wouldn't know it's fire-rated. Imagine the clean, rich lines of clear glass. With ALUFLAM storefront and curtainwall systems, this is reality. Contact them for further information.

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www.aluflam-usa.com

| Circle Reader Service #160

ulated Composite Spandrel Glass Panel

pes Industries, Inc.

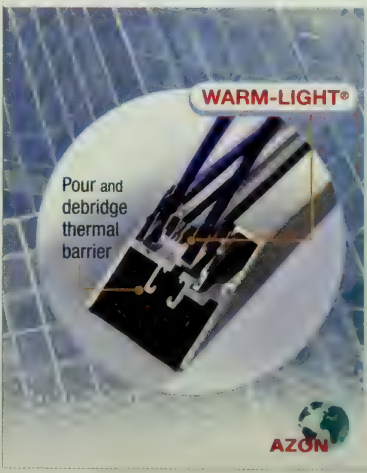
MapeSpan is a laminated composite glazing panel that combines a heat strengthened glass with ceramic frit on the #2 surface, an insulating core, and a finished interior. Laminated wall panels can be glazed in a monolithic unit from a single source which eliminates costly field labor. Specialty panels to meet fire and sound codes are also available. Interior finishes include porcelain on aluminum, Kynar, anodized and baked enamel. Consult the company's web site for design information or contact the factory.

800-228-2391
www.mapes.com

| Circle Reader Service #158

Extreme Performance Insulating Glass

AZON USA INC.



Warm-Light® spacer for insulating glass provides a more comfortable interior environment, reduces thermal conductivity and condensation on the glass surface while lowering utility costs. Azon is the global leader in developing technology for the manufacture of thermal barrier aluminum fenestration, commonly referred to as the pour and debridge method.

800-788-5942
www.warmedge.com

| Circle Reader Service #161

Polycarbonate Panels

CO-EX Corporation

For transparent roofing, skylights or side walls, consider Macrolux® BDL from CO-EX. These panels feature a unique lightweight, multi-layered polycarbonate construction giving them increased thermal insulation and structural strength with high impact resistance. BDL is a complete glazing system with all necessary fittings required to economically fasten the system to most structures. BDL panels have a clear, extruded UV absorber on both sides.

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Versatile Windows

Fenevations, LLC

Fenevations manufactures MegaWood, Infinity Bronze, and SteelView windows. Megawood offers fine hardwoods with furniture-grade finishes, combined with heavy gauge bronze or hand welded, aluminum extruded exteriors. Infinity Bronze is a unique thermally broken solid bronze system offering beauty, style and traditional sightlines. SteelView offers stainless steel beauty for contemporary designs.

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| Circle Reader Service #164

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Goldray Industries Ltd.

Decorative glass made with Goldray
Ceramic Frit coating is available in
virtually limitless pallet of colors an
designs. The coating is permanentl
fused to the glass surface creating
durable and low maintenance prod
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Please visit Goldray's web site to lear
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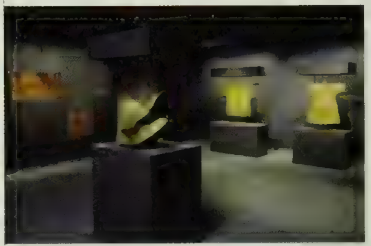
| Circle Reader Service #1

Anti-Reflective Glass

IGT Glass



Luxar anti-reflective glass is perfe
for any glass application where gla
and reflection are not wanted. Lux
reduces glare and reflection to le
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thicknesses to meet any proje
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ISG also offers a wide variety of su
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igh-Performance Translucent Building Systems

alwall Corporation

Gathering LEED™ points through daylighting can greatly impact any project. Kalwall's highly insulating, diffuse-light transmitting, translucent skylights, wall systems and replacement windows are uniquely suited to achieve the desired results. The use of Kalwall can contribute points in the categories of Sustainable Sites, Energy & Performance, Materials & Resources, and Indoor Environmental Quality.

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www.kalwall.com

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Fire-Resistant Glass

Pilkington North America - Fire Protection Glass

Pilkington Pyrostop™ is available with many options including opaque films, colored interlayers, surface designs and lightly sandblasted. Pilkington Pyrostop™ can also be combined with any of the Pilkington products to meet your design needs. For more information contact Technical Glass Products or see www.pilkington.com/fire or www.fireglass.com.

800-426-0279
www.fireglass.com

| Circle Reader Service #171

rved Translucent FRP Panel Systems

jor Industries, Inc.

When your daylighting project demands something special, the TransCURVE™ translucent building panel system provides exceptional performance, with the added benefit of a striking, unique appearance. TransCURVE™ glazing panels feature a visually attractive aluminum grid core in several popular patterns, giving panels a refined look while maintaining exceptional strength. TransCURVE™ also features a premium architectural-grade FRP exterior skin that blocks damaging UV rays while transmitting the beauty of natural light.

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SAFTI FIRST Fire Rated Glazing Solutions

SAFTI FIRST Fire Rated Glazing Solutions has been manufacturing fire-rated glass and framing for over 20 years. SAFTI FIRST's SuperLite™ product line includes fire-rated glazings for every application, rated from 20-min. to 3-hr. SuperLite™ can protect against noise, attack, impact, bullets, blast, hurricane and UV rays and is available in virtually any architectural make up, with enhanced energy performance. U.S. manufactured to ensure fast lead times. Call them at 888-653-3333 or visit www.safti.com for all your fire-rated glazing solutions.

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nAire Inc.

Custom-designed retractable roof structures and operable skylights capable of spanning up to 140-ft. At the touch of a button, motorized panels retract to open up to 50% or more of the roof area. OpenAire can span up to 140-ft. and do custom designs (domes, barrel vaults, biparting, etc.) using its exclusive maintenance-free, thermally broken aluminum framing. These enclosures and operable skylights are perfect for indoor waterparks, pools, atria, and anywhere that you want to bring the outside in.

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Fire Rated Aluminum Framing

SAFTIFIRST

With SAFTIFIRST's SAFTIfire Frames, rated 45-min. to 2-hr., you can create the maximum barrier against fire and radiant heat while providing attractive framing that meets all the temperature requirements of the national building codes. Design flexibility of multiple forms makes for easy installation, creating a sleek, attractive profile.

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Unicel Architectural is the proud manufacturer of this unique patented glazing product: Vision Control®. With this custom unit, enjoy total control of light, privacy and sound without worrying about cleaning. Unlike ordinary blinds, Unicel's pivoting blinds made of extruded aluminum are mounted inside a hermetically sealed glass unit offering you 100% dust-free and germ-free louvered glazing, without cords or strings! Blinds are operated using a hand crank, thumbwheel, motorized switch or computer. Ideally suited in interior partitions, doors, windows, curtain walls and skylights.

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Free-Pattern Rotating Carpet Tiles

Binvetec, LLC

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ROTATING CARPET TILES™

Free Pattern Rotating Carpet Tiles
with TractionBac™ are the only mod
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designed to allow a multitude of pat
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using only one tile design. The 3-f
square commercial grade class-1 car
pet is suitable for all interior enviror
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Optional full-service floor desig
services available by the produc
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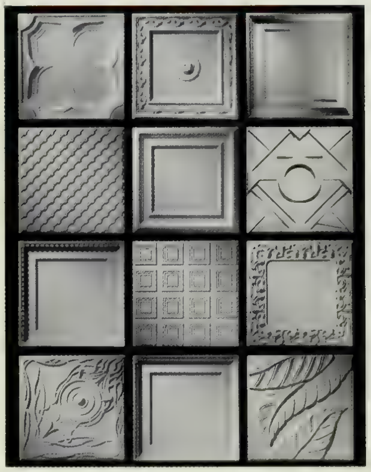
| Circle Reader Service #17

Ornamental Plaster Ceiling Tiles

Above View Mfg., By Tiles, Inc.



Above View ornamental plaster ceiling tiles are fabricated from a nontoxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1,300 custom colors and faux finishes available upon request.

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Outwater has updated its line of Designer Glass Film Overlay with nearly 70 different patterns from which to choose, not only offering new designs, but different application and usage capabilities as well. This enables users to easily create or "overlay" an entirely new permanent or temporary appearance for any existing glass installation as well as for many other smooth, shiny nonporous surfaces such as panels, partitions, display cases, signage, mirrors, windows, doors, displays and exhibits. Originally created as a low cost alternative to etched glass, Glass Film will not discolor. Free 1,100+ page Master Catalog available.

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Gage Corporation, Intl.

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interior architectural applicatio
where patterns that feature high l
ter, relief, durability, and cost effect
installation are a requireme
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however, custom collaboration
encouraged. Gagecast® is one com
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www.gageverticalsurfacing.com

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rystallized Glass Ceramic Architectural Panels

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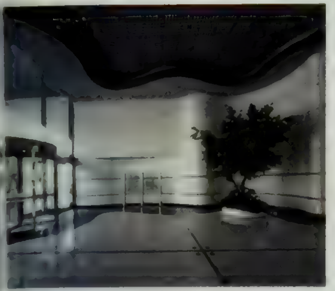


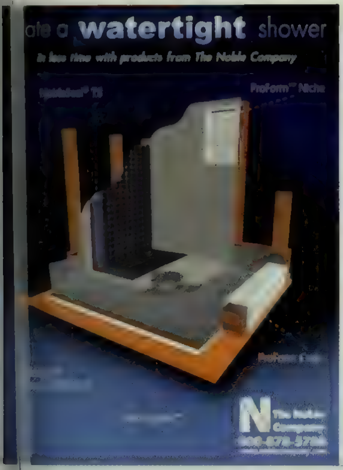
Neopariés® and Neopariés® LT are lighter yet stronger than granite. Commonly used for cladding interior and exterior walls, flooring, and counter or tabletops, they are virtually impermeable and not subject to freeze-thaw damage, penetration by rust, mortar or other staining substances. Contact Technical Glass Products at (888) 397-3473 or www.tgpamerica.com.

888-397-3473
www.tgpamerica.com

| Circle Reader Service #180

tertight Showers

Noble Company



Save time and money and avoid leaks that can lead to the growth of mold. Use Noble Company's shower waterproofing products to help ensure a watertight installation. Products include sheet membranes, like Chloraloy® and NobleSeal® TS, ProForm™ Niches and Curbs, and PRO-SLOPE™, a composite that creates the required slope under the waterproofing membrane. Proven products with a history of success. For more information call or visit their web site.

800-878-5788
www.noblecompany.com

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Ceramica

Even though Viva Cermica had introduced Central Station at Cersaie 2005 as a color through porcelain floor tile series, it was easy to convert it to a wall covering. It's just so adaptable with its suggestions of metal and its decorative squares and circles in crackle glaze. And both the big diameter and the 30cm square are ideal for minimalist mosaic decors in bathrooms or on walls in public areas.

www.cerviva.it

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Architectural Sun Control

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www.asca-design.com

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Architectural Sheetmetal Products

CopperCraft

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www.coppercraft.com

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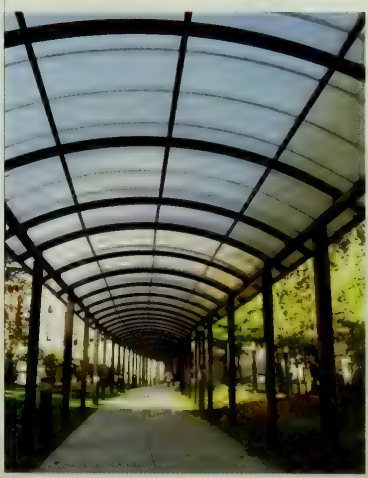
Canopies & Walkway Covers

CPI Daylighting, Inc.



CPI provides single source responsibility for entire structure from the ground up. CPI's new Clearspan design for translucent canopies and walkway covers eliminates the horizontal cross beam and offers an economical, functional design with unequaled aesthetic appeal. Clearspan provides an excellent shelter and gives an open-air feeling by allowing natural daylight through to light up the area below.

800-759-6985
www.cpidaylighting.com

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4C Horizontal Wall-Mounted Mailboxes

Custom Home Accessories, Inc.

These versatile new multi-compartment mailboxes are ideal for apartment, office and custom mail center applications. Custom Home Accessories has upgraded the security of their horizontal mailboxes with heavy-gauge doors and high security locks to meet or exceed the newest USPS 4C standards. Units come in 7 different colors with a variety of configurations available.

800-265-0041
www.mailboxes.info

| **Circle Reader Service #186**

Plasma Stand

Gyford Productions

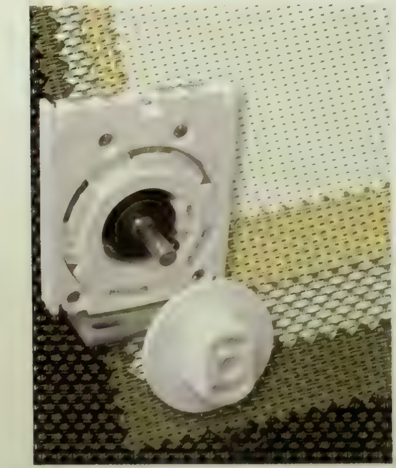
Gyford Productions™ presents the height adjustable Tahoe Plasma Stand, part of the Tom Barber Furniture Collection™. The patented fermatspace™ design system uses stainless steel tube members and wire that is tension-laced, so that no structural members touch. Its simple elegance pays the ultimate complement to your hi-tech monitor investment.

www.standoffsystems.com

| **Circle Reader Service #187**

Solar Shading System

MechoShade Systems, Inc.



Mecho/5 with EcoVeil is the first complete solar shading system to receive Silver Certification from MBDC. With this certification, MechoShade Systems has set a new industry standard for high quality and eco-friendly technology. For more information on Mecho/5 with EcoVeil, please visit their web site.

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www.mechoshade.com

| **Circle Reader Service #188**

Clean-Lined Outdoor Furniture

Modern Outdoor

Modern Outdoor offers three con
plete lines of high-style, clean-line
environmentally conscious outdo
furniture. The Modern Outdo
Collections are commercial grac
products designed for use in all ma
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hospitality, parks, resorts, hotels—y
have an aesthetic that is perfect for
residential client's backyard settin
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polyboard, stainless steel or powde
coated steel, and a natural composi
material. They offer net pricing
qualified members of the trade. Vie
the entire collection online.

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| **Circle Reader Service #1**

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1964. Finlandia offers precut sau
packages and modular sauna roo
as an affordable luxury that can
included in any remodel or new co
struction. The company markets fo
all-clear western softwoods and is t
only manufacturer to use 1-in. by
in. paneling, instead of the chea
1/2-in. by 4-in. material used by o
ers. Finlandia's packages include
room parts, a choice of a Finn
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with choice of glass, and all necess
accessories.

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to commercial/industrial buildi
holding extension ladders in pl
Hooks grab top rung of ladder.
bars make transition to roof safe
comfortable. Meets OSHA
R406.10357. Models for gutters
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more comfortable to use than ver
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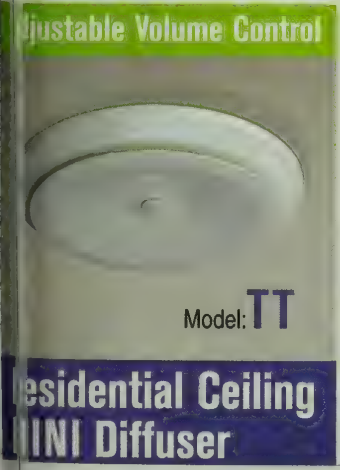

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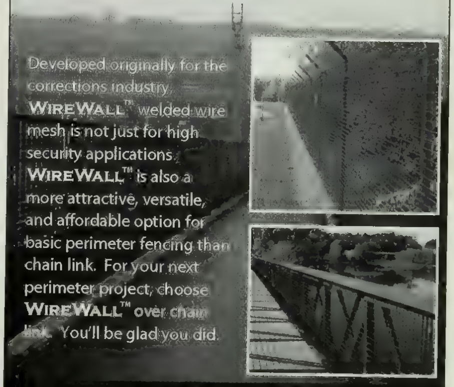

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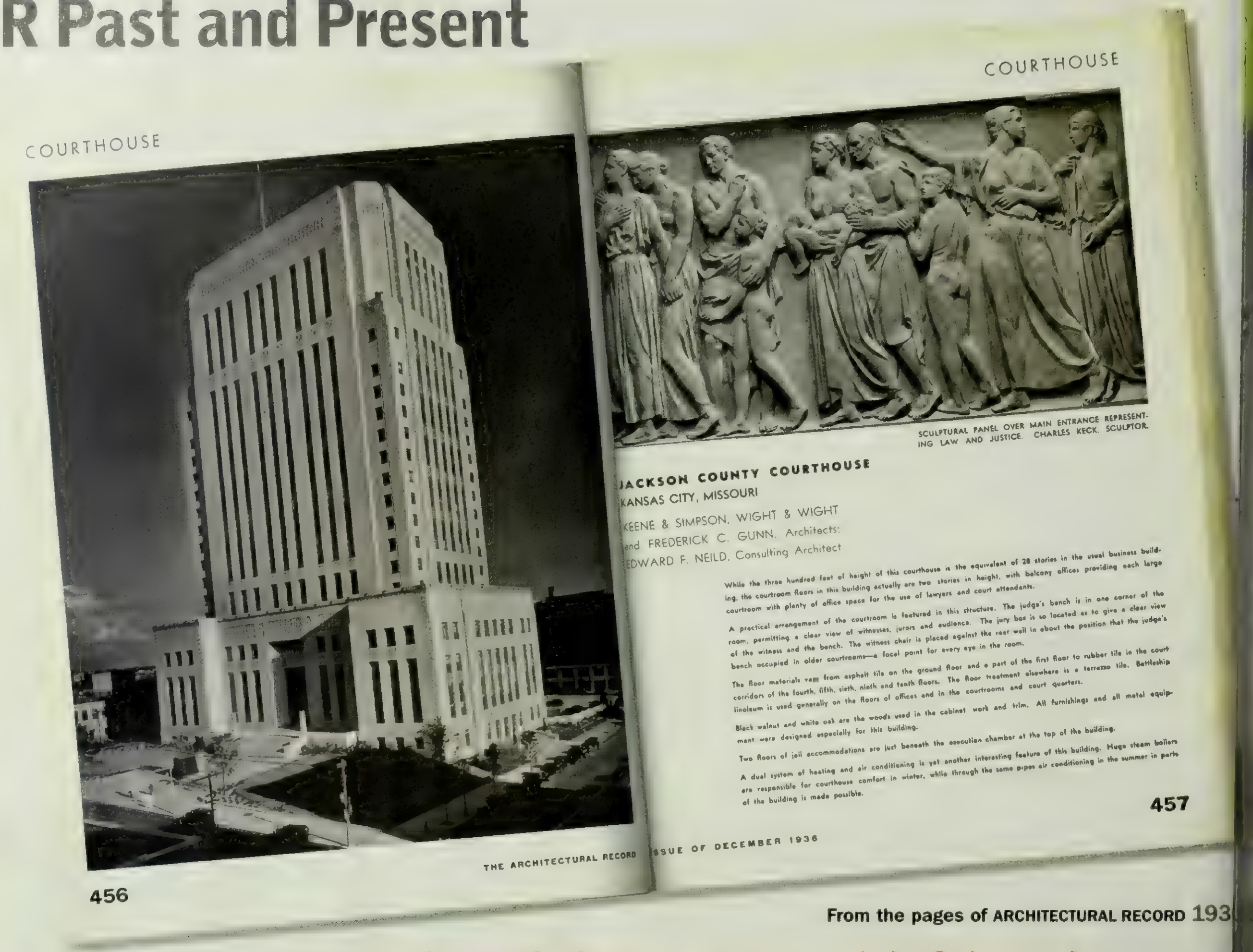

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While the three hundred feet of height of this courthouse is the equivalent of 28 stories in the usual business building, the courtroom floors in this building actually are two stories in height, with balcony offices providing each large courtroom with plenty of office space for the use of lawyers and court attendants.

A practical arrangement of the courtroom is featured in this structure. The judge's bench is in one corner of the room, permitting a clear view of witnesses, jurors and audience. The jury box is so located as to give a clear view of the witness and the bench. The witness chair is placed against the rear wall in about the position that the judge's bench occupied in older courtrooms—a focal point for every eye in the room.

The floor materials vary from asphalt tile on the ground floor and a part of the first floor to rubber tile in the court corridors of the fourth, fifth, sixth, ninth and tenth floors. The floor treatment elsewhere is a terrazzo tile. Battleship linoleum is used generally on the floors of offices and in the courtrooms and court quarters.

Black walnut and white oak are the woods used in the cabinet work and trim. All furnishings and all metal equipment were designed especially for this building.

Two floors of jail accommodations are just beneath the execution chamber at the top of the building.

A dual system of heating and air conditioning is yet another interesting feature of this building. Huge steam boilers are responsible for courthouse comfort in winter, while through the same pipes air conditioning in the summer in parts of the building is made possible.

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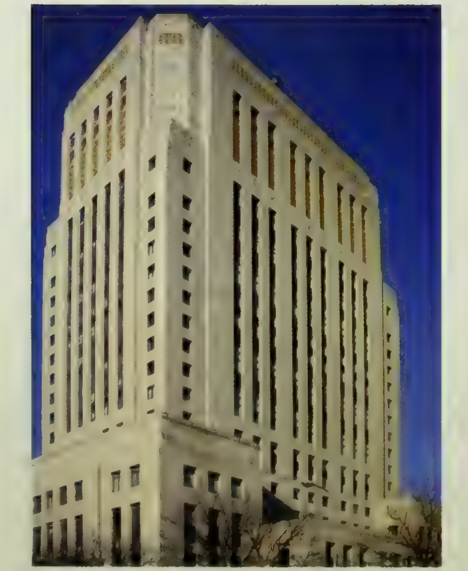
SSUE OF DECEMBER 1936

From the pages of ARCHITECTURAL RECORD 193

Classicism, our old friend



The 1934 Jackson County Courthouse recently underwent a complete exterior renovation.

Looking at the Jackson County Courthouse in Kansas City, Missouri, built in 1934, and originally published in RECORD in December 1936, the application of the term "Classical" seems obvious. The stripped-down, Art Moderne version of Classical-style architecture reached a kind of apotheosis in the 1930s through the Works Progress Administration. In fact, it was even given a name, Publ Works Administration (or PWA) Moderne.

In Kansas City, a small army of architects, including Keene & Simpson, Wight & Wight, Frederick C. Gunn, and Edward F. Neild, produced a monumental, hierarchically planned, strictly symmetrical, an thoroughly institutional building with a sprinkling of archaic Greek and Roman touches of sculpture an architectural decoration filtered through the Machine Age aesthetic.

Architects continue this covert infusion of Classical architecture strategies into modern styles, sometimes skipping the Modern altogether. One need only look as far as Washington, D.C., to see the Classical style hazily incorporated into today's built environment, perhaps most famously in Friedrich St. Florian's controversial design for the National World War II Memorial on the National Mall [RECORD, August 2004, page 71].

What is at stake today in the use of the Classical tradition is what we might simply call "good tast At its most authentic, the reintroduction of Classical orders during the Renaissance and ever since has reflected a continuing reliance on the decorum embodied in the buildings of the ancient world, where specific building styles acted as cues to a public often educated through imagery alone. The style's popularity still emerges in new courthouse projects, as well as in the call for the preservation of older buildings: In 2005, Berkebile Nelson Immenschuh McDowell Architects designed a master plan for the Jackson County Courthouse site and restored its exterior. Accepted as a norm over centuries of use, th Classical tradition is our most comforting friend, if not always the most apposite. *Russell Fortmeyer*

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Zaha Hadid Architects, Phaeno Science Center, Wolfsburg, Germany, 1999-2005. Photo © Werner Huthmacher

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August 2006

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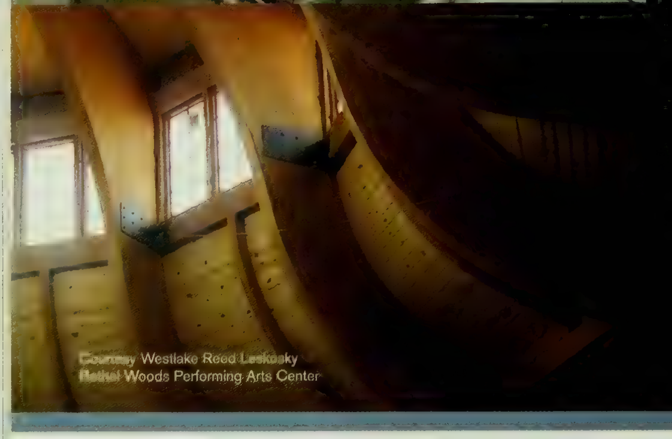
For its Manhattan debut, Foster and Partners created the new HEARST TOWER with a glass-and-steel shaft hovering atop a vintage low rise.
Photography: © Chuck Choi

Projects

Architects worldwide are designing iconic buildings known not just for their feats of engineering and design, but for their sustainability. As the standard gets higher, the gospel of green is being heard and echoed, as these four projects prove.



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Building Types Studies: Performing Arts

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Lighting

Wood, acrylic domes, and playfully geometric fixtures are just some of the clever ways lighting designers have chosen to filter or showcase, but never hide, the rhythmic sensory lighting experiences we feature this month, including a lounge, a high-style furniture showroom, and an art gallery.

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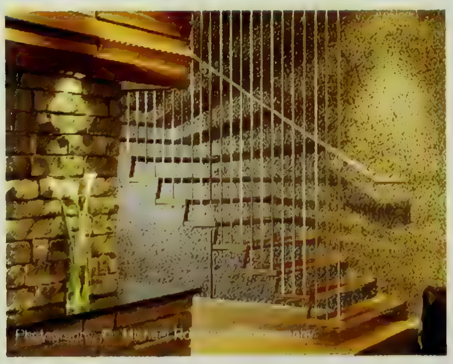
Flos fulfills the luminous visions of Patricia Urquiola and Martino Berghinz at B&B Italia in Barcelona



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Archrecord2

archrecord2 focuses on two architects who followed their hearts. While Matthew Hufft traveled a path that presented itself to him at age six, architect and real-estate management consultant Winnie Lee found her way by transitioning with the jobs that came her way. Both architects discovered what makes them tick, and the results speak for themselves.

House of the Month

Somewhere between the ground and a canopy of trees, in Massachusetts, is the Geothermal House by Maryann Thompson Architects. Oriented to take advantage of the daily path of the sun, the home uses cross-ventilation, geothermal heating and cooling systems, and flexible partitions throughout.

Courtesy Maryann Thompson Architects/Ioana Urma

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Five Distinct Dramas

Editorial

By Robert Ivy, FAIA

This summer, five superintendents of education gathered in a conference room in Washington, D.C. Somewhat nervous to be meeting so far from home, one member admitted that she had never visited capital before; another had lived in nearby Arlington, Virginia. She and r colleagues formed no ordinary sampling of educators: Each had sur- ed Hurricane Katrina.

Convened by the American Architectural Foundation (AAF), this e cadre all hailed from the Mississippi Gulf Coast and were attending a ool Design Institute, a special iteration of an AAF program called "Great ools by Design." The event formed the second gathering for the group, follow- a larger meeting on their home turf in Gulfport, Mississippi, in February. ended to improve the quality of educational facilities, the Great Schools pro- m routinely brings together leaders in education, then pairs them with ionally recognized experts who act as advisers in architecture, regulation, planning—with the hope of advancing innovative new school designs.

The stories that these administrators told, and the images that they wed, presented five distinct dramas. In one case, a superintendent shared ages of her school, which remained filled with waterborne debris months r the cataclysmic storm had washed back to sea. Already, she and her rd had marshaled resources to purchase a large plot of land on higher und, but they were filled with questions. Should they sell the original ool property located near the Gulf? Where on their new property did it ke the most sense to erect a new building, and could they achieve the same se of community away from the comfortably scaled downtown streets?

Another leader presided over a historic school whose wood-framed ster walls had soaked up the seawater and filled with mold. Yet FEMA ised to classify the property as a total loss, allotting significantly less than total cost for repairs. Who could she call for advice? A state historic ervation officer? Could the property be converted to other, more commer- ly valuable uses? Should it be demolished? And if so, where should the lents relocate? Most were currently housed in trailers.

At the conclusion of the day, one lesson stood out: This group of ded- ed citizens had been asked to do more than we should expect of public ants. Confronted with the weight of catastrophe, each had risen to the chal- es, even heroically, struggling in the aftermath through long hours with little local help. By and large, they had managed to get their school systems func- ing again (all were operating by November), yet something was missing.

In the throes of the Depression, when the nation faced a period of intractable poverty, the Roosevelt Administration devised a quasi-governmental agency, the Tennessee Valley Authority (TVA), to confront Appalachian poverty. Reaching across local and state borders, this federally chartered organization dealt with endemic flooding, brought electric power to the poorest mountain coves and small towns, then subsequently functioned as an economic development engine for a still-poor region. Its charter in 1933 made its mission explicit: "a corporation clothed with the power of government but possessed of the flexibility and initiative of a private enterprise." Ironically, when the lights went on at the Tupelo Cotton Mill, the small Mississippi town became America's first TVA city.

The analogy seems clear. Louisiana, Mississippi, Florida, and parts of Texas faced a perfect storm of troubles following Katrina that no local effort could fully understand or solve. In the wake of immense loss, what should be rebuilt, and where? Months after the disaster, local governments continue to struggle with the answer, chafing at the disparity between new FEMA flood maps, federal regulations, and the rights of property owners. The voters clearly want their land back. Despite the best efforts of trained planners, architects, or committed professionals in a variety of fields, from health care to education, the future of the area remains clouded. Who can sort through competing claims?

The daunting challenges faced by those five educators demonstrate the need for an authority like the TVA, mandated by Congress, capable of spanning state governments and resource networks, cutting red tape, and leading the way toward the thoughtful redevelopment of the Gulf South after this country's largest natural disaster. Schools are so critical for economic development that even the slightest diminution of their effectiveness would spell a kind of permanent doom for future growth. But a guiding hand, supported by economic development as the affected region rebuilds, could set the stage for decades of enlightened 21st-century prosperity, moving away from danger and pointing to the higher ground.

The American Architectural Foundation is to be commended for taking a leading role in helping this stricken area recover its school facilities. It remains for Congress and the current administration to take the next, bold step toward ensuring our nation's well-being by creating an authority to oversee the rebuilding of the Gulf South in a bold, visionary manner. While we are still reeling from Katrina, new storms are brewing in the Gulf, and our planning has just begun.

Robert Ivy

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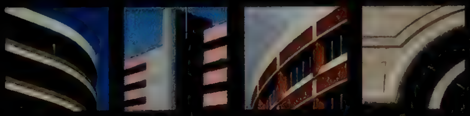

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Letters

The power of education

Thank you for a wonderful editorial [July 2006, page 17] that speaks to the power of an education in architecture, to the contributions of the best of those who make that education possible, and to the insights and accomplishments of our newest Topaz Laureate. Those of us who have had the privilege of teaching and working with William McMinn, of being mentored and taught by him, and of understanding architecture through his eyes, gladly echo your warm praise.

—Marilys Nepomechie
Miami, Fla.

The architectural continuum

Though I attended the AIA convention, I had to depart prior to Bill McMinn's speech. However, the recap in Robert Ivy's July editorial evoked a memory that I think is worth recounting.

This past year my son was able to attend the Florence Studio, in Italy, of Kent State University, where he is undertaking his master's degree in architecture. He arrived in Florence on a Sunday afternoon and, unlike my experience arriving in London 36 years earlier to study at the Architectural Association, he had a cell phone with which he could instantly communicate what he was experiencing.

He was standing before the Duomo and was overwhelmed. He walked through the archway of the Uffizi and stood on the steps of the Medici Library and called home. "Dad," he started, "I just realized something about architecture that never occurred to me until I came here: It's a continuum," he noted. "I am the next generation, carrying on a tradition of design that connects me to these great architects."

With this observation, his passion to learn and experience architecture grew immeasurably. Those of the profession who hold deep passions for design and its power to uplift our communities begin, I believe, by reaching the understanding my son shared with me.

—Judson Kline, AIA
Cleveland

A blustery submission

I cannot understand how the scheme by workshop/apd [June, 2006, page 122] could have won a prize in your High Density on the High Ground Competition, given that the building would reside in a category five hurricane zone. This scheme violates all the rules of lateral wind force design along a major waterway! Although flooding may not be a problem on the high ground along the river's edge, Bernoulli principle wind forces would certainly be important, probably rendering the impact-resistance materials and structural loadings on such a promontory scheme unaffordable to most potential buyers. Furthermore, the orientation is perpendicular to the probable direction of winds blowing down the river corridor. The architect of that project does not appear to have ever experienced a real hurricane.

—James L. Wells, AIA
Miami, Fla.

L.A.'s highs and lows

As an urban planner and designer, I have always been intrigued by Los Angeles, and I appreciated the variety of projects and articles covered in the May 2006 issue.

Your Snapshot [page 77] captured the essence of the Watts Towers project well. It's noteworthy that this important symbol of determination, attitude, and community spirit survived the Watts riots of 1965.

However, as I looked over the photos of Morphosis's Science Center School [page 132], the last facility I would have guessed to occupy the building was a school. It reads like an armory that should have been reused as a laboratory for testing chemicals or lab mice, not educating children. The breezeway looked as if the kids were marching to prison, not a class or a field trip. I can't imagine the author having fun writing about this building, for she retracted most of her compliments from the body of the piece in the last paragraph, "Mayne's muscular, industrial-strength, steel-and-concrete apparatuses could be a wee bit overwhelming." No kidding.

—John G. Howard
Charlotte

What New Orleans needs

Am I the only one who shuddered in horror at the headline "Morphosis unveils plan for downtown New Orleans" [July 2006, Record News, page 25]? Hasn't the city suffered enough? I am not saying that there is no place for the type of aggressive, style-driven, dark gray, placeless, pointy-stick architecture Morphosis practices, but it is the very opposite of what New Orleans needs at the moment: a continuation of its own distinctive, colorful, and humane architectural traditions. The accompanying image of a giant suburban corporate office park where downtown should be makes the point. I recommend that New Orleans follow the recent trend of replacing the architect with Renzo Piano.

—David D. Quillin, AIA
Berlin, Md.

Hybrid hotel

The 21C Museum Hotel in Louisville, Kentucky [June 2006, page 305], is composed of five former warehouses that were morphed into gallery spaces, a restaurant, and a hotel. What is unclear is whether or not downtown Louisville needs a space like this that atypically fuses these functions. And though an attempt was made to preserve the facade for historic purposes, one cannot trace the original bourbon warehouses in the new design—a missed opportunity indeed.

Furthermore, since a visitor may be able to explore the galleries without leaving the hotel premises, it may deter one from venturing out into the rest of the city. In *The Death and Life of Great American Cities*, the late Jane Jacobs emphasized the importance of old buildings in cities. The impact the hotel will have on the community remains to be seen, as does whether or not Louisville can support a nontraditional building type of this sort.

—Adrienne Batson-Cooper,
Assoc. AIA
Brooklyn, N.Y.

Corrections:

The Wellesley College Wang Campus Center project story [July 2006, page 110] had two errors in the Sources section at the end: The furniture companies Fritz Hansen and Nienkamper were misspelled. Two architects were incorrectly credited for the MIT Brain and Cognitive Sciences Complex [July 2006, page 138]. Julian Beinart is a principal at Charles Correa Associates, and Roger Goldstein, FAIA, should have been listed as principal in charge at Goody Clancy. In the July coverage o the AIA Housing/HUD Awards [page 212], three projects were mistakenl listed as HUD winners: Building Community, 6 North Apartments, and Metro Hollywood Mixed-Use Building (though Metro Hollywood won a Housing award). Also, the Ala J. Rothman Accessibility award was misspelled. A rendering of the Standard Hotel in July's News sectio [page 34] should have been credite to Stephen Alesch of the New York City firm Roman and Williams.

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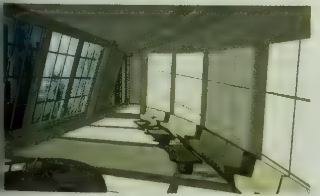

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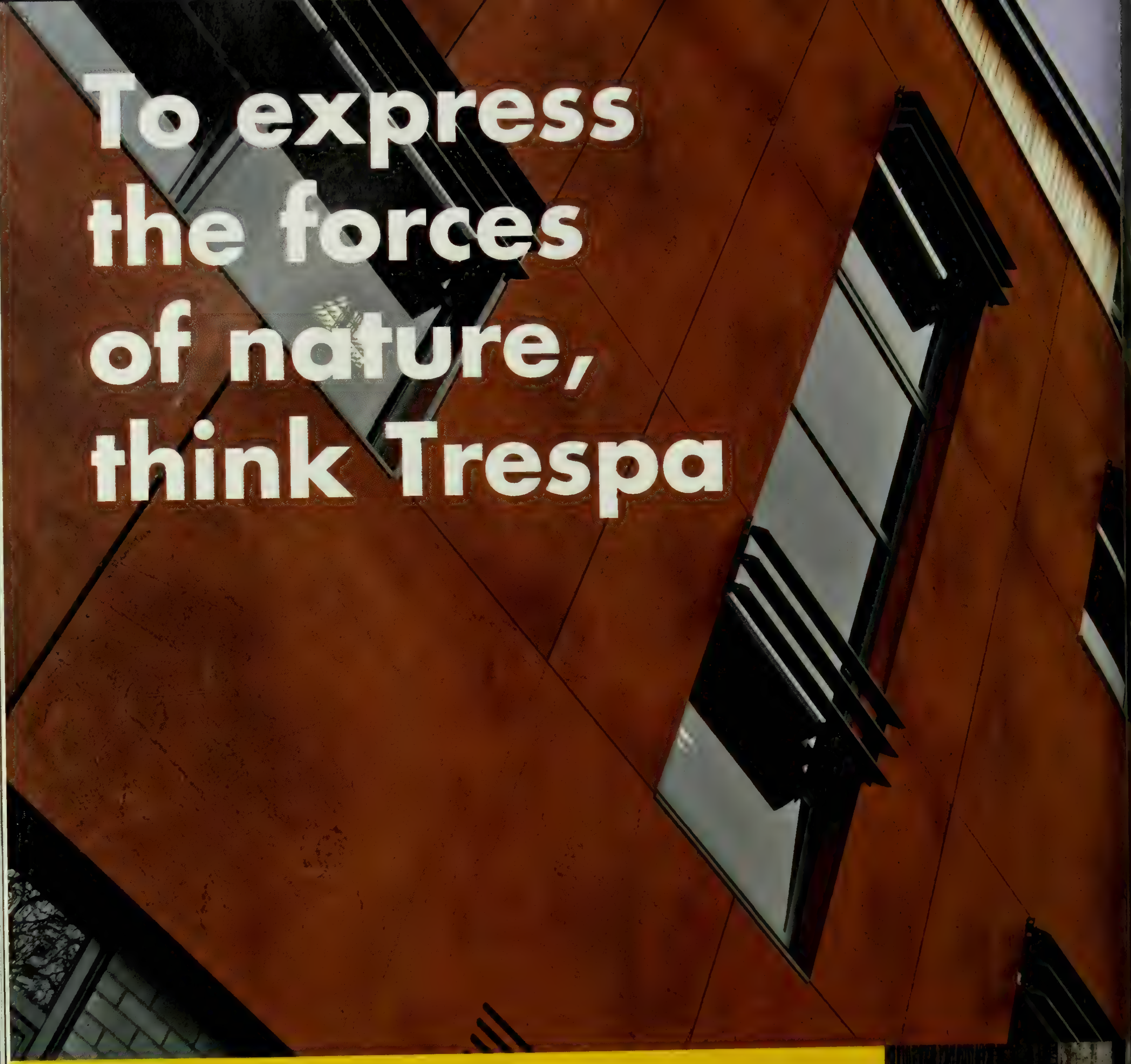

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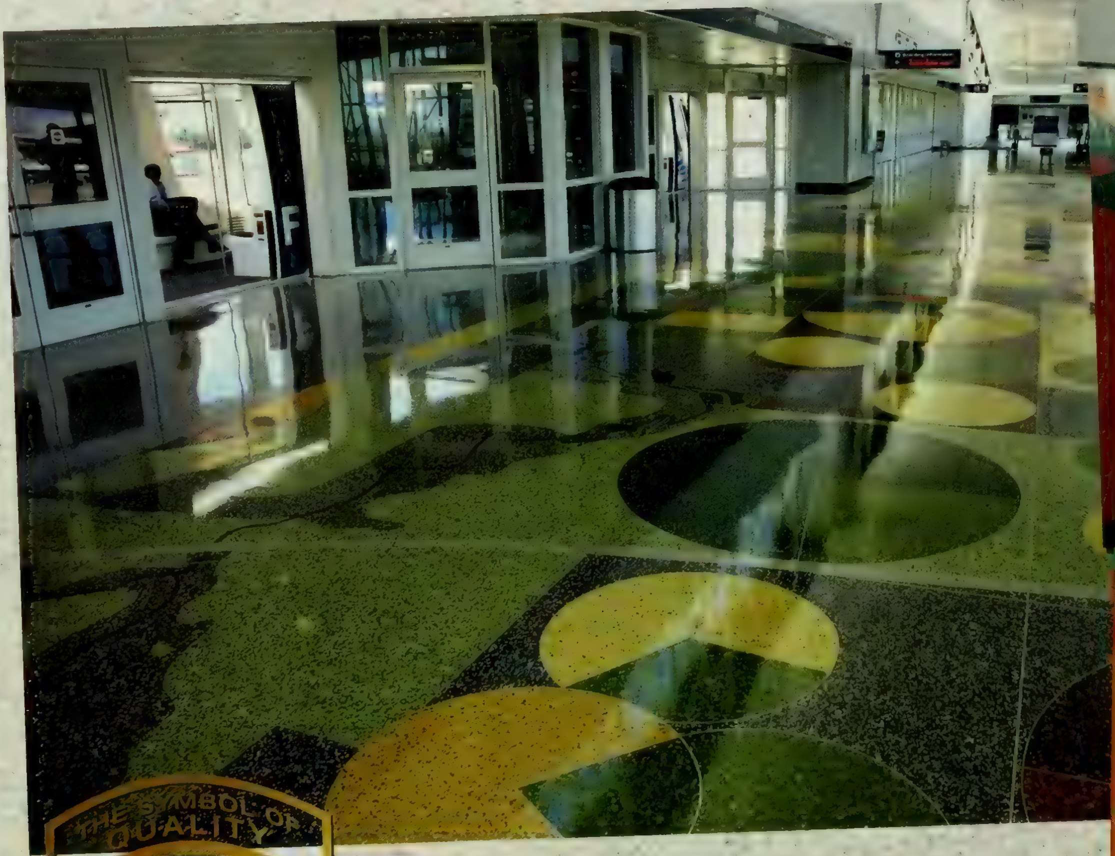

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Record News

Highlights

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p.36 **Reality-TV invasion**

›ergdoll offers glimpse of MoMA tenure

June, the Museum of Modern Art nounced that Barry Bergdoll will cceed Terence Riley, AIA, as ilip Johnson Chief Curator of chitecture and Design. Bergdoll, 10 is currently the chair of the art tory department at Columbia iversity, says he is taking the job a time when architecture exhibi- ns are in vogue. Not long ago, ›unting an architecture show as a way for a museum to empty t its galleries," he says. "Now it ems to be a way to fill them."

The problem for Bergdoll is it other New York museums em far ahead of MoMA in exploit- the public's infatuation with hitecture. The Guggenheim 1ere the current Zaha Hadid iibition runs through October 25) ›lanning shows on Frank Lloyd Wright, Eero Saarinen, and Le Corbusier in conjunction with the 50th anniversary of its Wright building, while the Whitney Museum has a Buckminster Fuller retrospective in the works. And the Metropolitan Museum of Art has scheduled a show on the architecture of Frank Stella. Meanwhile, MoMA, which Riley left in April, has only one show in the pipeline: a survey of the relationship between art and science curated by Paola Antonelli and tentatively set for 2008.

Bergdoll won't move to MoMA full-time until January 1, and he will continue teaching at Columbia. But he says he plans to spend the fall "in overdrive," developing programs for the museum.

The historian's academic interests include not only 20th-century stars like Marcel Breuer, but Karl Friedrich Schinkel and Leon Vaudoyer. Bergdoll says he has no plans to present shows on the pre-Modernists.

His main focus will be the 20th century—and the 21st. In addition to what he calls "monographic shows," he expects to mount shows on "process," including, most likely, digital fabrication, which he says is changing the "command structure" by allowing architects to assume responsibility for making the things they design. He says his interest in the topic was piqued when, at Columbia, he worked with Marble Fairbanks Architects on a slide library made from digitally produced components.

While developing ideas for exhibitions, Bergdoll is also looking to fill two curatorial positions that were left open as Riley's tenure was ending. "One of the most exciting parts of this is that it's not just about taking over the helm; it's about putting together a team." *Fred A. Bernstein*

Columbia's Barry Bergdoll takes over Riley's MoMA role in January.

ıilds unveils final design for Freedom Tower

nark the end of design develop- ıt on the World Trade Center edom Tower, in June, David Childs, A, of Skidmore, ngs & Merrill, sented several l drawings and ma- ttes to an audience 00 architects, engi- rs, and clients at the New York Chapter's 16 Design Awards.

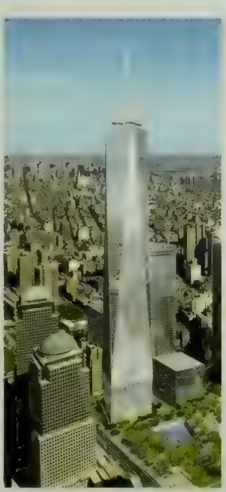
"The building is arkably the same he one I unveiled ear ago," Childs l, but he stressed e significant design 1ements. The ding's antenna, example, will be a ed form; Childs and collaborator Kenneth Snelson originally proposed an open latticework. This final iteration features a lozenge shape that tapers to a point, and the weblike frame is slightly visible underneath it. Childs said the iconographic element will still have the quality of lightness, and suggested that it would be programmed with light displays and other dynamic features.

In addition, the glazing surrounding the building's 69 office floors will eliminate spandrels. Each glass component will stretch to the floor's full, 13-foot-4-inch height. This feature offers "a unique character of monumentality," Childs said. "It also provides a marker in the sky of the most important place, the memorial itself."

Childs confided that he "wasn't sure" of the ultimate evolution of the building's base. Safety concerns forced the design team to wrap the bottom, 186-foot-tall portion in a wall of concrete that is almost uniformly 3 feet thick. "The concrete could have looked like a barracks," he said. The solution: Two thousand sheets of prismatic, laminated safety glass will clad the concrete. The 4-by-13-foot panels feature prisms of different depths; the variety is meant to animate the skin with abstractions of shadows and colors that move according to weather conditions, or with the changing perspective of the viewer. "Most consistent with the building would be to build the space out of glass," Childs noted. "This is a friendly, warm plinth to the shaft above it."

The multifaceted skin will fold and morph into seating at the plaza level. Childs is working with Peter Walker, who is also the memorial's landscape architect, on this aspect of the project.

World Trade Center developer Larry Silverstein introduced Childs at the ceremony. He promised listeners that the Freedom Tower—for which below-grade excavations, footings, and foundations were begun in April—would be ready for occupancy by 2011, and the entire site completed the following year. *David Sokol*



The Freedom Tower design has been finalized.

Dispatch from the 2006 London Architecture Biennale

This year's London Architecture Biennale (LAB), the city's second, attracted approximately 75,000 visitors over 10 days in June—despite public funding issues and protests from animal-rights activists.

The festivities kicked off with a sheep drive. Richard Rogers, Renzo Piano, butchers, and shepherds guided a flock of 30 sheep and thousands of onlookers along a city-center route, crossing the Millennium Bridge and passing a crowd of animal-rights protesters on the way. Enabling the shepherds to exercise historic droving rights was meant to highlight the huge urban changes that have occurred in the capital over the centuries.

Coinciding with Britain's annual Architecture Week celebration, LAB was planned as a "contrast to the Venice Biennale, where star architects flew in, showed off completed models and projects, and flew out again," LAB director Peter Murray said. "The place was fairly irrelevant."

London is currently going through a period of change that is "greater than at any time since the Victorians," Murray explained. The Biennale's theme this year was "Change": About 200 public events and exhibitions—including what is billed as the world's biggest Pecha Kucha (Japanese for "chit chat")—engaged in discussions about the past and future of London. Plans for a Biennale radio station, however, were axed for lack of funds; LAB organizers received only half the money that they were expecting from the Arts Council development agency.

Architects Rogers and Piano (in T-shirts, left and right) joined in the LAB launch.

"London Architecture Biennale," said an Arts Council spokesperson, "requested sums to make capital changes to a building that would act as the Biennale Hub for two weeks. This was not considered value for money in relation to our financial criteria for grants for the arts."

Murray, who was forced to raise the shortfall, had expected that the public funding "would reflect the growth of the Biennale." Indeed, compared to 2004, this Biennale grew threefold. Plans for further extensions in 2008 will largely depend on funding. "It would be really nice to find somebody who'd come in with quarter of a million quid," Murray quipped. *Robert Such*

Hugh Stubbins, architect of landmarks, dies at 94

Hugh Stubbins, Jr., the Cambridge, Massachusetts, architect who died on July 5 at age 94, will best be remembered for the slant-topped Citicorp Center in midtown Manhattan. The slender, 914-foot tower was designed to snap the boredom of what Stubbins called "the new, slick, slab buildings that march up the avenues." Completed in 1978, Citicorp was clad in alternating bands of aluminum and glass and capped by a 160-foot-high roof pitched at 45 degrees. Its large public plaza, which provided enough airspace at ground level to build a new St. Peter's Lutheran Church, and its unique three-story market energized the streetscape.

Citicorp exemplified a lifetime of innovation and achievement. Stubbins was born January 11, 1912, in Birmingham, Alabama, and graduated from the Georgia Institute of Technology in 1931. A nationally ranked track star in college, a pulled hamstring kept him out of the Olympics. He received a master's from Harvard Graduate School of Design (GSD) in 1935, then worked for a firm that designed Cape Cod–style homes, although he championed Modernism. Walter Gropius invited Stubbins to teach at the GSD, where he remained for more than a decade. During that period he was best known for the Berlin Congress Hall, which got the nickname the "pregnant oyster" after the shape o the roof's concrete shell.

Over the next 50 years, Stubbins's firm designed more than 800 buildings, many of which sporte firsts and won superlatives. Citicorp pioneered the use of a tuned-mass damper in tall buildings. Congress Ha was the largest effort at employing concrete shell technology at the time And his last design, for Landmark Tower in Yokohama, Japan, mixed templelike corners and modern engineering in a flexible skeleton meant t absorb earthquake shocks. "I think his personality was formed by the period," says Stubbins Associates director of design C. Ron Ostberg, AI who joined the firm in 1984. "Coming out of the Second World War, there was a tremendous optimism that architects were going to build America. He was enthusiastic and he was self-confident. The attitude in thi country today is, in my opinion, extremely different." *Greg Goldin*

Stubbins (above) was responsible for the controversial Citicorp Center (right).

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Controversy over plans to renovate Aalto interior

Alterations to a quiet poetry room, designed by Alvar Aalto for Harvard's Lamont Library, have sparked protest from members of the university's Graduate School of Design (GSD) and others in the preservation community. The work is currently under way inside the Woodberry Poetry Reading Room, which was designed in 1949 and is one of only four Aalto projects in America. The 1,030-square-foot room was designed for the intimate enjoyment of poetry. Four consoles were equipped with record players, and ambient lighting and comfortable seating enhanced the contemplative atmosphere.

The Woodberry is cited as a fine example of both midcentury interiors and of Aalto's execution of design that completely integrates finishes, furnishings, and lighting. Toshiko Mori, FAIA, chair of the Department of Architecture at GSD, calls this room "one of the greatest examples in this country of total design."

Harvard plans to update the room's technological capacity and replace worn-out elements. Two of the consoles have been removed, and the remaining two will be converted into reading tables. One of the bookshelves is cited as a security concern and will be taken out to provide librarians with an unobstructed view. Also, the room will be equipped for computer use; digital recordings will coexist with vinyl. Einhorn Yafee Prescott principal David Fixler, AIA, the historic preservation specialist consulting on the project, says the rest of the room will be untouched.

Mori spearheaded the faculty protest and has, along with GSD alumnus Frederic Schwartz, FAIA, initiated a letter-writing campaign against the project. Mori learned of the renovation from an anonymous letter and has requested a stay of execution on a "very drastic renovation that removes any trace of Aalto."

"This reading room is highly significant and quite rare," says John Stubbs, World Monuments Fund vice president of field projects, who has gotten involved with Mori's campaign. "It should be a gem in the crown of America's greatest university."

Harvard says the 57-year-old Woodberry reading room needs freshening up.

Fixler calls Mori's response an "overreaction," noting, "Preservation is about adapting buildings and managing change." He adds that Aalto would have disapproved of freezing the room in a historic moment.

With backing from historic preservationists as well as from faculty from Harvard and other institutions, Mori hopes to force a reconsideration of the renovation. The project, which began June 9, was originally scheduled for completion by September. *John Gendall*

Mixed-use complex to replace Saarinen lab

Ma Bell facility will be demolished.

In April, the future owner of the Bell Telephone research facility in Holmdel, New Jersey, announced that he would demolish the signature building of the Eero Saarinen–designed complex once the sale is finalized. In a recent interview, Preferred Real Estate Investments founder and C.E.O. Michael O'Neill sketched out the company's plans for the site.

O'Neill says that the 2-million-square-foot laboratory, completed in 1962, does not have adaptive-reuse potential: "This building was built for a single purpose, and that purpose no longer exists. There is nothing usable here." Saarinen had unified Bell's entire R&D program under one roof, with interior spaces articulated for specific purposes.

In addition, O'Neill says that the mirrored-glass curtain wall, which contributed to the status of the building as a celebrated piece of Modern architecture, is energy inefficient.

Preferred's master plan for the 472-acre site retains the water towe and artificial lakes from Saarinen's original design. The lab building will be replaced by three or four smaller low-rises dedicated to corporate an pharmaceutical facilities, as well as restricted-age housing. *J.G.*

Factory designed by Albert Kahn is now progressive mixed-use building

Not every Modernist marvel is destined for the trash heap. In August, tenants will start taking occupancy of phase one of a redeveloped Ford plant in Richmond, California, that was designed by Albert Kahn in 1930. The 517,000-square-foot, National Register building will contain a city in miniature: residential and office space, a performance venue, shops, and light industrial uses.

Local firm Orton Development acquired the building in 2004 from the City of Richmond, which had taken possession of the structure in 1975. Orton retained Marcy Wong & Donn Logan Architects to oversee the resurrection of the building, which had been damaged in the 1989 Loma Prieta earthquake. Wong says that Kahn's "practical solutions for assembly-line mass production," such as long structural spans and sawtooth skylight monitors, suit an adaptive reuse that is "consistent with the original architectural rhythm of the building's structural and fenestration systems." Moreover, the waterfront location, which Ford required for transportation purposes, "means unobstructed, sensational views of the Bay and San Francisco and Marin County beyond."

The complex, renamed Ford Point, also will be distinguished by the 75,000-square-foot performance space retrofitted into the factory's former craneway—with one of the machines still intact. Wong says the space will host arts as well as sports events; Orton expects it to be completed by the spring of 2007. *D.S.*

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U.S. Mayor's Conference president says 2030 Challenge is realizable

In May, the U.S. Conference of Mayors unanimously adopted the ambitious 2030 Challenge [RECORD, July 2006, page 158]. The resolution calls for an immediate 50 percent reduction in fossil-fuel energy consumption in new and renovated buildings, and it seeks to eliminate fossil fuels from new construction by the year 2030.

The president of the U.S. Mayor's Conference, Dearborn, Michigan, mayor Michael Guido, says soaring energy prices and global warming research impelled the mayors to adopt the 2030 Challenge: "If we don't meet greenhouse gas reduction targets, [then] there will be catastrophic climate change."

The country's mayors have tools at their disposal through which they can change energy policy, Guido adds. "Cities build buildings—whether that is the local schoolhouse or the fire station. We are consumers of building materials so we can have an influence," he says. "And with zoning and building codes and other tools, we can have an additional influence on the general public's concept of what constitutes a good building."

Guido says that Chicago, San Francisco, Salt Lake City, and Seattle have taken steps toward mandating a greener built environment. But the mayors have just gotten started. "We are going to take up the Challenge in October at our energy summit, which is where our resolutions come to life, and from there we take the show on the road." *Alex Ulam*

First cradle-to-cradle house built in Roanoke

The Roanoke, Virginia, neighborhood of Gainsboro may be an unlikely place to find America's first cradle-to-cradle (C2C) home. But this month local architects Stephen Feather, AIA, and Richard Rife, AIA, will complete a 1,623-square-foot, two-bedroom house that is designed according to those sustainability principles.

Feather and Rife's design was one of 625 entries in a 2004 international competition to apply architect William McDonough's C2C protocol to residential construction. Local firm SmithLewis Architecture arranged the competition when Roanoke officials hired firm Principal Gregg Lewis, AIA, as consultant to jump-start the city's neighborhood revitalization initiative.

"We feel that sustainability needs to be part of the discussion," Lewis says of the decision to launch the competition as a way to solicit the best designs. Several other C2C submissions are now in various stages of development.

This inaugural project features locally harvested wood, low-VOC interior finishes, a geothermal heat pump, and roof-mounted photovoltaics. It was also designed for modular production, although this example was stick-built. "We hope our C2C house will be an impetus to get the industry involved in green building; we see this as a way to make green building more affordable and more mainstream," Rife says.

The C2C house fits in with the neighbors.

When complete, the house will blend aesthetically with the modest Southern homes surrounding it. To Lewis, what began as "an incredibly rich design problem" now promises to be an engine for redevelopment. "All of a sudden you have this gem on the block," he says. "People will be motivated to reinvest in the community." *Violet Law*

2006 COTE winners reflect green trends

A decade ago, Gail Lindsey, FAIA, remembers "begging and pleading" friends to submit the 14 projects needed to be considered for the first Top Ten Green Projects program, which she began as chair of the AIA Committee on the Environment (COTE). Times have changed. This year's crop was chosen from more than 70; where entries were once limited to homes and environmental centers, the winners range from a Paul Rudolph–inspired home to a dog-adoption park to a warehouse turned corporate headquarters.

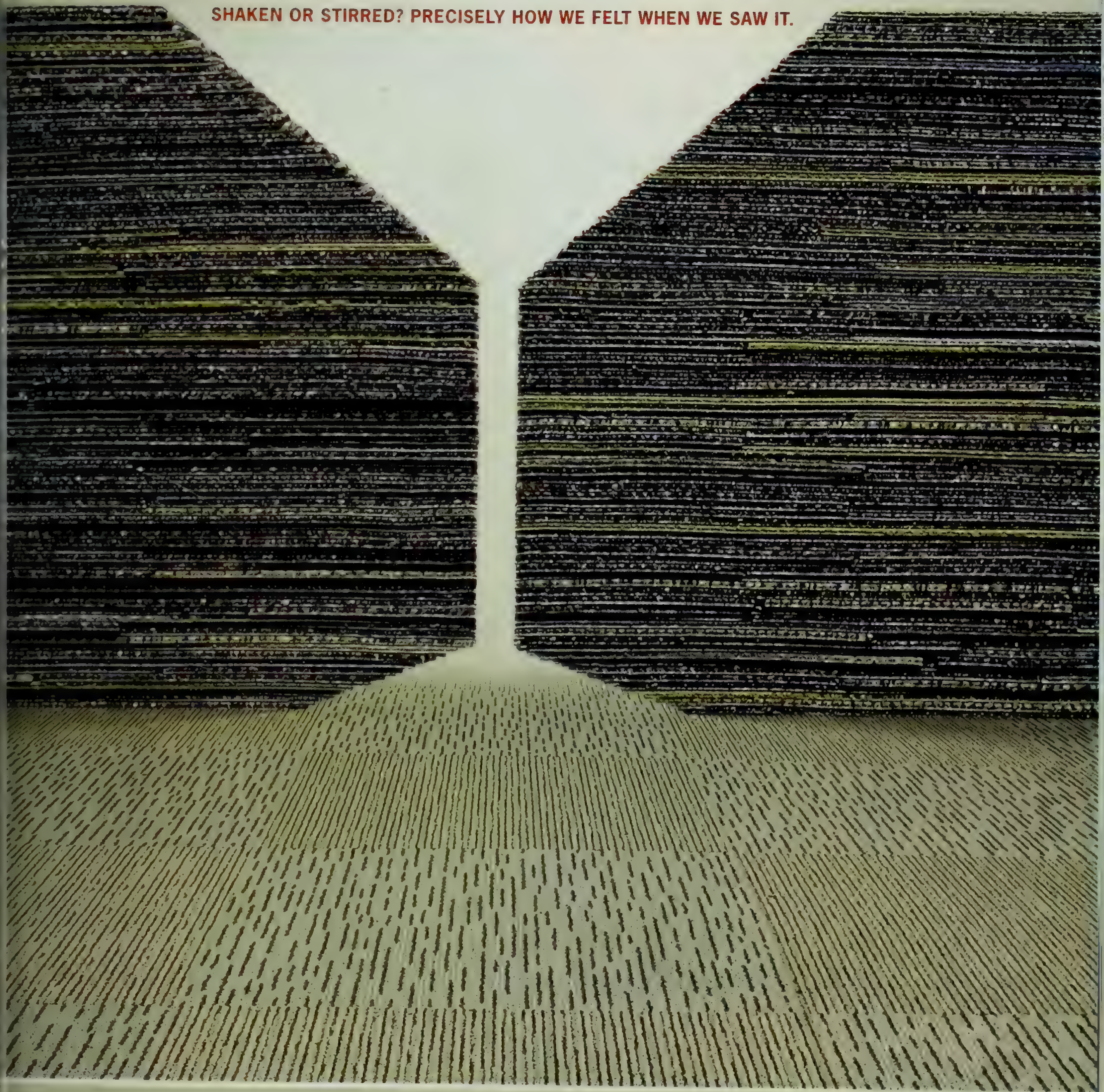
The 2006 Top Ten list was announced this spring. While exemplary, it also takes the pulse of green building in the U.S., according to Lindsey and Henry Siegel, FAIA, a member of the COTE national advisory group that revised the Measures of Sustainable Design last year.

For example, Siegel says, "In my perception, some architects think that sustainable design is all about the technological solution—they don't get that an architect has a lot of influence about how they shape it and shade it." The 56,000-square-foot Benjamin Franklin Elementary School in Kirkland, Washington, demonstrates that they're coming around. Mahlum Architects deployed natural ventilation and used the surrounding forest as a protective screen to eliminate unnecessary systems—including ceiling fans. (As part of last year's metrics revisions, such passive design elements were given more prominence on COTE's Top Ten application.)

This year's list also confirms that green design is developing its own aesthetic vocabulary. "We don't mean tacked-on solar panels," Siegel says, "but integrating it in a meaningful way." The Solar Umbrella House in Venice, California, designed by Pugh + Scarpa, was inspired by Rudolph's 1953 Umbrella House, but clads its canopy in photovoltaics. Lindsey and Siegel add that buildings like Seattle's Ballard Library, by Bohlin Cywinski Jackson, are more sustainable because communities are less likely to knock down beautiful designs.

The buildings also may be harbingers of change. More green buildings emphasize long-term evolution, and what Lindsey calls a "regenerative" stance toward context. While Susan Maxman & Partners renovated the Motherhouse convent in Monroe, Michigan, with an eye to ecological targets, it was also prepared for reuse when its order of sisters can no longer use it.

Even if the Top Ten program doesn't pave the way for evolution in green building, there's a good chance that architects will feel its effects: The AIA, Siegel says, is considering adapting COTE's rigorous submission process to its other honor award programs. This year's winners can be viewed at aiatopten.org. *D.S.*



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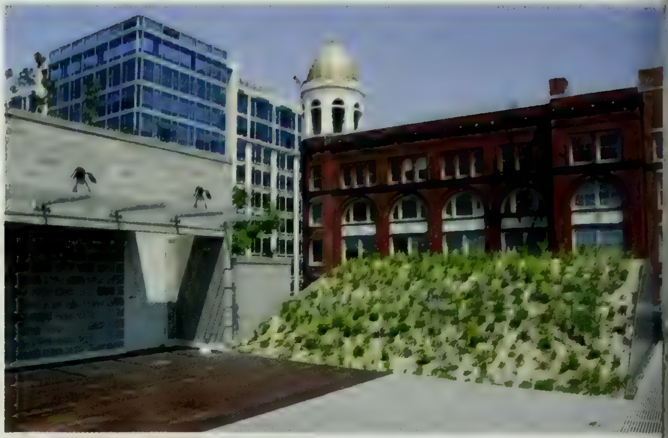
ASLA retrofits headquarters with green roof

The American Society of Landscape Architects opened a green roof on its Washington, D.C., headquarters in conjunction with Earth Day this year. "We wanted to show how you can maximize both the environmental benefits and the aesthetic and amenity benefits of a green roof through the landscape architect's design," says Nancy Somerville, executive vice president of the ASLA.

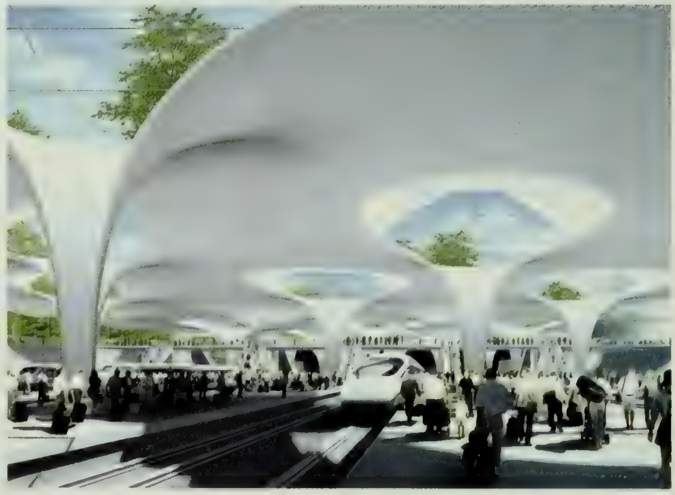
The 3,300-square-foot roof, the design of which was led by New York–based Michael Van Valkenburgh Associates, replaces a standard black tar surface on the 10-year-old brick building. Visitors to the roof climb a staircase to reach an aluminum-grate landing suspended above various succulents. Sweet fern and fragrant sumac grow among other plants in deeper soil on the roof over the staircase platform. Two formerly imposing air-return units are also hidden within slopes of semi-intensive plantings that include African ice plants, evergreen moss flox, and various leafy stonecrops, anchored by a system of steel cables. "Having blooming plants around you at and above eye level is a very different experience from having them just around your feet," Somerville says, adding that the roof feels cooler than neighboring roofs, giving visitors an "oasis feeling."

Roof accessibility was key but costly, with a staircase and entryway taking up two thirds of the $950,000 budget. The narrow building envelope limited room for construction staging and storage, thereby increasing labor costs. ASLA officials also cite high materials costs in the wake of Hurricane Katrina.

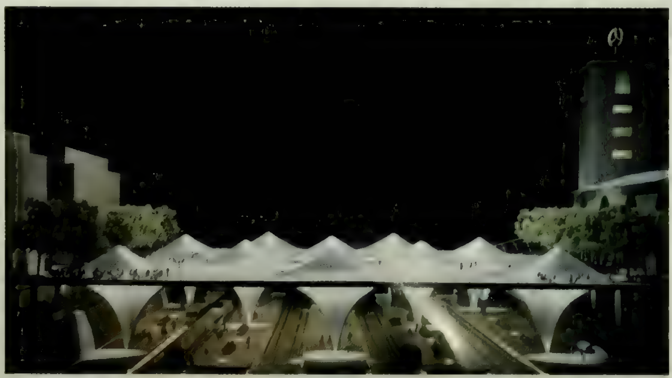


An air-return unit is transformed into stadium seating for plants.

The ASLA has ongoing plans to monitor the project and share findings to help further green-roof development: flow meters are being fine-tuned to gauge the roof's storm-water retention, and temperature readings will be compared with those from an adjacent non-green roof. *Paul Burkhardt*



The subterranean Stuttgart Main Station, a Holcim Gold winner, was commended for reclaiming above-ground public space and reducing energy consumption.



Cash awards for eco buildings announced

The Holcim Awards, the first global competition for sustainable construction projects, awarded $1 million in prize money at a ceremony in Bangkok in April. One $300,000 Gold Prize went to Ingenhoven Architekten of Düsseldorf, Germany, for a new main train station in Stuttgart, and another to Proyectos Arqui 5 CA of Caracas for an infrastructure project in a shantytown located in the Venezuelan capital. The $250,000 Silver Prize went to a team coordinated by Luigi Centola and Mariagiovanna Riitano for a master plan for the Mulini Valley in Italy. Daniel Pearl, with Mark Poddubiuk and Bernard Olivier of Montreal-based L'Office de L'Eclectisme Urbain et Fonctionnel, received the $150,000 Bronze Prize for an urban-renewal project in Montreal that stressed community involvement and incorporated high-performance building technologies.

The announcement culminated three years of forums and regional competitions underwritten by the Holcim Foundation, which is endowed by Swiss cement company Holcim. The international jury included architects Enrique Norten, Thom Mayne, FAIA, and Adele Naude Santos, FAIA.

Because development pressures and needs vary throughout the world, criteria for sustainable design are often applied differently in different regions, says Adele Santos, who served as jury head and who is dean of the MIT School of Architecture and Planning. Choosing winners from such a wide range of building practices required evaluating social equit economic performance, and ecological impact. "In Africa and Latin America, there was more emphasis on building sustainability into commu nity development, whereas in North America and Europe, the solutions were more technologically oriented and generally within the green-building arena," Santos says.

The United States failed to rank Santos reasons that the competition wasn't well publicized here, and that Americans are relatively new to sustainable design. "In Europe, building a sustainable way has been going o for a while," she says, adding, "Here the clients don't think long-term." A.

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Chicago's Green Permit Program exceeds expectations

When it is completed in early 2009, the 60-story 300 North LaSalle tower will be one of Chicago's taller structures. But local real estate players may take closer note that developer Hines Interests snatched a building permit faster than average, too—in a speedy 30 days.

300 North LaSalle finds it easier being green.

The 1.3-million-square-foot office tower is one of a growing number of buildings participating in Chicago's year-old Green Permit Program, which expedites permitting for sustainable buildings. Designed by architecture firm Pickard Chilton, the building will have a 50 percent green roof and will use condenser water supplied by the Chicago River, thus eliminating cooling towers. Hines vice president of construction Scott Timcoe says that while the building was green anyway, the company applied to the program because "there is a huge construction boom in Chicago—sometimes getting a permit can be really laborious."

With the support of Chicago's Mayor Richard M. Daley, the city's Department of Construction and Permits initiated the program in April 2005 to "encourage the use of green incentives, especially in private development, and to make sure that they're doing it well," says Erik Olsen, who has been the program's chief administrator since its launch.

Projects fall into one of three tiers, and greener projects gain greater benefits. The owners of Tier I commercial and other nonresidential projects, including 300 North LaSalle, promise that they will be LEED-certified. These buildings also feature one item from a "menu" of sustainable building strategies that include, among others, a green roof, extra affordability, and transit-oriented development. Owners who accomplish LEED Silver building with one menu item advance to Tier II, which waives the consultant review fee in addition to granting permits in 30 days. Tier III projects must earn LEED Gold and feature two menu items, for which the consultant fee is waived and a permit issued within 15 days. Olsen explains that LEED status verifies an application (residential projects must conform to the Chicago Green Homes rating system), while the menu items act as billboards for sustainability.

Olsen first sits down with project teams several months before they make permit submittals. Applicants view this extra attention as an added benefit: "We received good advice from Erik and his department, which found its way into the design of the building," says Roark Frankel, senior vice president of U.S. Equities, project managers for the Spurdis Institute for Jewish Studies, a Tier II building currently under construction.

Granting incentives at such an early stage in a building's development can be problematic. Besides submitting a LEED project registration number as part of a permit review, developers must file a proof of submission for LEED certification within 180 days of completion. They are also required to sign contracts binding them to their sustainability plans, and there are considerable consequences—fee reimbursement or permit revocation, for example—for not following through.

And yet, by the end of the 2005 calendar year, 19 green permits were issued for projects, and 36 permits have been issued so far this year, which puts the program well on track to meet its goal of 40. Olsen says that nonprofit and university owners took to the program the quickest, but that it now spans fuller range of building types.

Although there are no other cities with a program as comprehensive as Chicago's, Olsen has received inquiries from cities as far as Seattle and Toronto. In Washington, D.C., the organization GreenHome is pushing for local legislation for a green permitting system because, as GreenHome's executive director Patty Rose says, "Erik is running a program that is moving green building faster through permits, and I'm convinced that he's actually helping make better green buildings." *Amanda Webb*

Big bucks for green-roof retrofits in Chicago

A cool hundred grand: That's what the city of Chicago is offering downtown building owners to combat the urban heat-island effect. In June the city council approved the $500,000 Green Roof Improvement Fund, a tax-increment financing pilot program. It authorizes the Department of Planning and Development (DPD) to award grants as large as $100,000 for retrofitting buildings with green roofs.

The ordinance applies to the 40-square-block Central Loop District, which Green Projects administrator Michael Berkshire says is one of the city's most severe zones for heat-island warming as well as storm-water runoff. Building owners who are considering planting their roofs either apply online at the DPD's Web site (which will also feature information regarding green roof designers, contractors, and other resources) or by contacting the department directly. Successful applicants will be reimbursed for half of all expenses up to the $100,000 limit. Even though Berkshire reports that Chicagoans are currently cultivating 2.5 million square feet of green roofs across 200 projects, he admits, "There is risk: This is a new venture in the U.S. and cost is the main impediment."

City assistance should ease that pain. Green-roof retrofits cost $10 per square foot on average, Berkshire says, and most downtown buildings' roofs measure 10,000 to 12,000 square feet. By that calculation, he hopes to fund as many as 10 retrofits by the end of the year. If the funds dry up, then the program is a success and, he notes, "We'll move to more districts." *Kevin McCarthy*

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Architects, decorators, artists stop being polite on new HGTV program

A flamboyant artist, a former Miss Utah turned decorator, and three Harvard Graduate School of Design (GSD) graduates, among others: Their worlds collide on the new *HGTV Design Star*—and it turns out that these reality-show participants aren't so different, after all. They're all competitive, self-promoting, and have that certain telegenic something.

The new, eight-installment series is *Project Runway* meets *Trading Spaces*: Ten designers, formally educated or self-proclaimed, compete in weekly residential-design challenges that force one elimination per episode (expect double slaughters in the show's third and fourth installments). HGTV *Designed to Sell* host Clive Pearse plays mother hen, while the panel of judges includes *In Style* magazine executive editor Martha McCully, fashion designer Cynthia Rowley, and TV design personality Vern Yip. Audiences will select the victor—who lands her own HGTV series—from the final two. "This is a huge commitment for the network," says James Bolosh, vice president of original programming. The channel is distributed to approximately 90 million American homes.

Competitors were chosen from 1,500 submissions. Was HGTV hoping to engage mainstream Americans in a dialogue with academic architecture or cut a few highfalutin architects down to size? Bolosh says it was pure coincidence that yielded Harvard GSD grac Joseph Kennard and twin brothers Teran and Teman Evans. "I think the bring something very different to the table," he concedes. In that spirit of variety, th competition's cha lenges will range from decorating t large-scale projects. "They do every thing from ripping out cabinets to adding walls to resolving fish-out-of water situations. It's not just paint and fabric swatches."

In the July 23 premier episode, viewers learned that the trio of architects completed the first task, meeting their initial cha lenge. And so has the program itself. Even though the final smack down doesn't tape until August 25 the second season of *Design Star* is already in the works. *D.S.*

Pearse (above, at right of center, in dark shirt) and contestants posing for the camera. Contestants in the midst of their first task, a house makeover (top).

Image of the Bank of America Tower at One Bryant Park courtesy of dbox. Architecture by Cook+Fox Architects.
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Futuristic tanks make sludge "magical"

proposed set of structures for Vashington, D.C., would lend a esign sensibility to a building type ot usually known for beauty: the astewater treatment plant.

The Blue Plains Advanced /astewater Treatment Plant plans) build a series of eight "digester inks" on the banks where the nacostia and Potomac Rivers meet. org & Associates designed the new ructures, which use microbes to onvert solid waste into a product iitable for agricultural use.

Models of the gester tanks show o rows of four 108-ot-tall, egglike forms nnected by foot-idges and anchored elevator towers. The nks will be covered in ribbed anodized adding, which the esigners say will make e towers appear nagical" and "otherworldly." The structures (which process 350 tons of sludge daily) will be visible from Alexandria, Virginia.

As a part of the $311 million project, Sorg & Associates has also designed several other structures that will be clad in more conventional metal and brick to match the facility's existing buildings, some of which date to 1938. According to the D.C. Water and Sewer Authority, the first of the digesters should be operating by fall 2010, with all eight completed by 2011. *Kevin Lerner*

D.C.'s designer wastewater treatment plant.

Inspired by Chinese example, Livingstone says London will build a model eco city

London's Mayor Ken Livingstone announced in April that he would like to have a 1,000-home "eco city" built in the Thames Gateway district, which is located in the city borough of Newham.

Livingstone made the announcement while he was in China reviewing plans for Dongtan [RECORD, March 2006, page 46], a city that will be powered by renewable energy. Located on the island of Chongming at the mouth of China's Yangtse River and designed by Arup, Dongtan is being planned as a self-sufficient community for 500,000 people. Its first phase, for 80,000 residents, will be completed by 2020.

Greenpeace originally proposed the London plan to the London Development Agency (LDA), also working with Arup. The LDA already owns land in Newham, but the exact location of the proposed development has not been determined. Like Dongtan, the London development would most likely be powered entirely by renewable sources such as wind turbines and photovoltaic cells. Livingstone said in a statement, "London's zero-emissions development will demonstrate that it is affordable and achievable to make all major new developments low-carbon." He hopes to break ground within a year.

According to Peter Head, a director of Arup who is also leading the planning for Dongtan, the Thames Gateway development could be realized by 2010. Head reflected that the London effort was meant to get the attention of the marketplace: "The idea is to demonstrate that a zero-carbon development can be a viable commercial proposition. With scale comes the opportunity to make the most of renewable technology." *John E. Czarnecki, Assoc. AIA*

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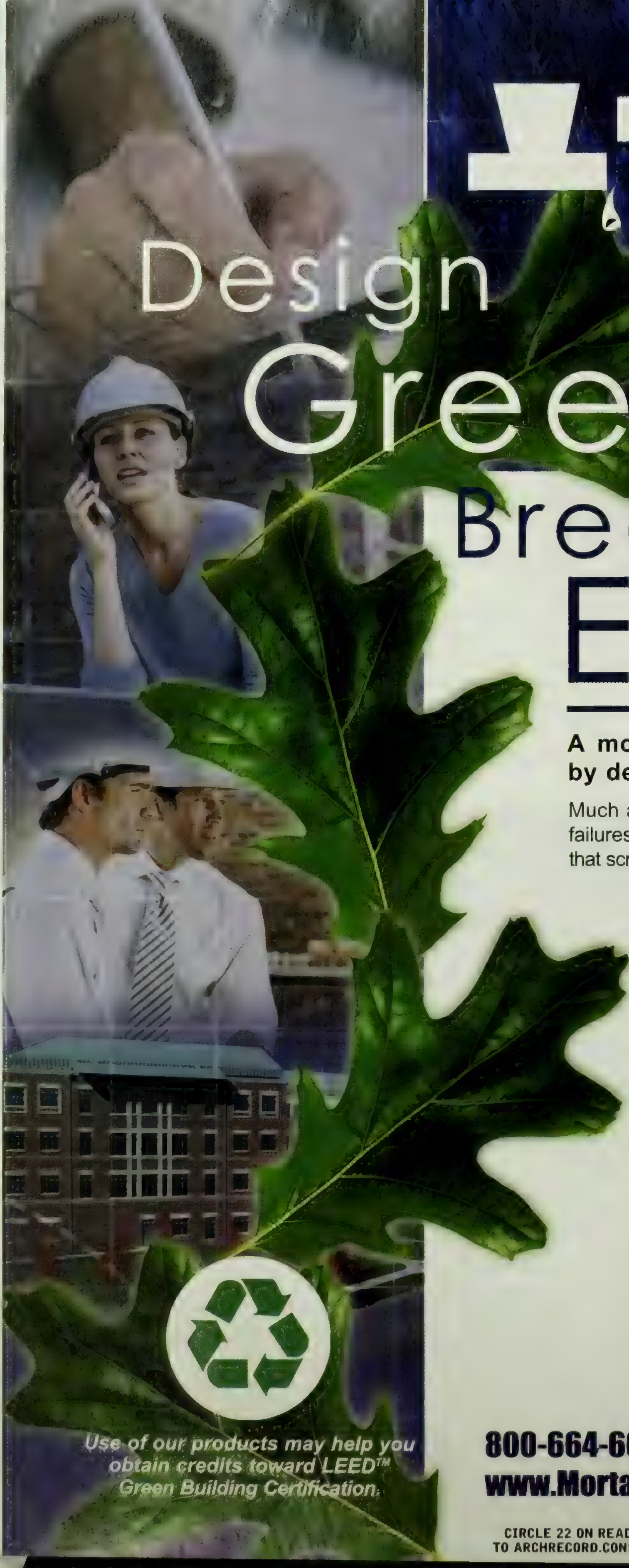

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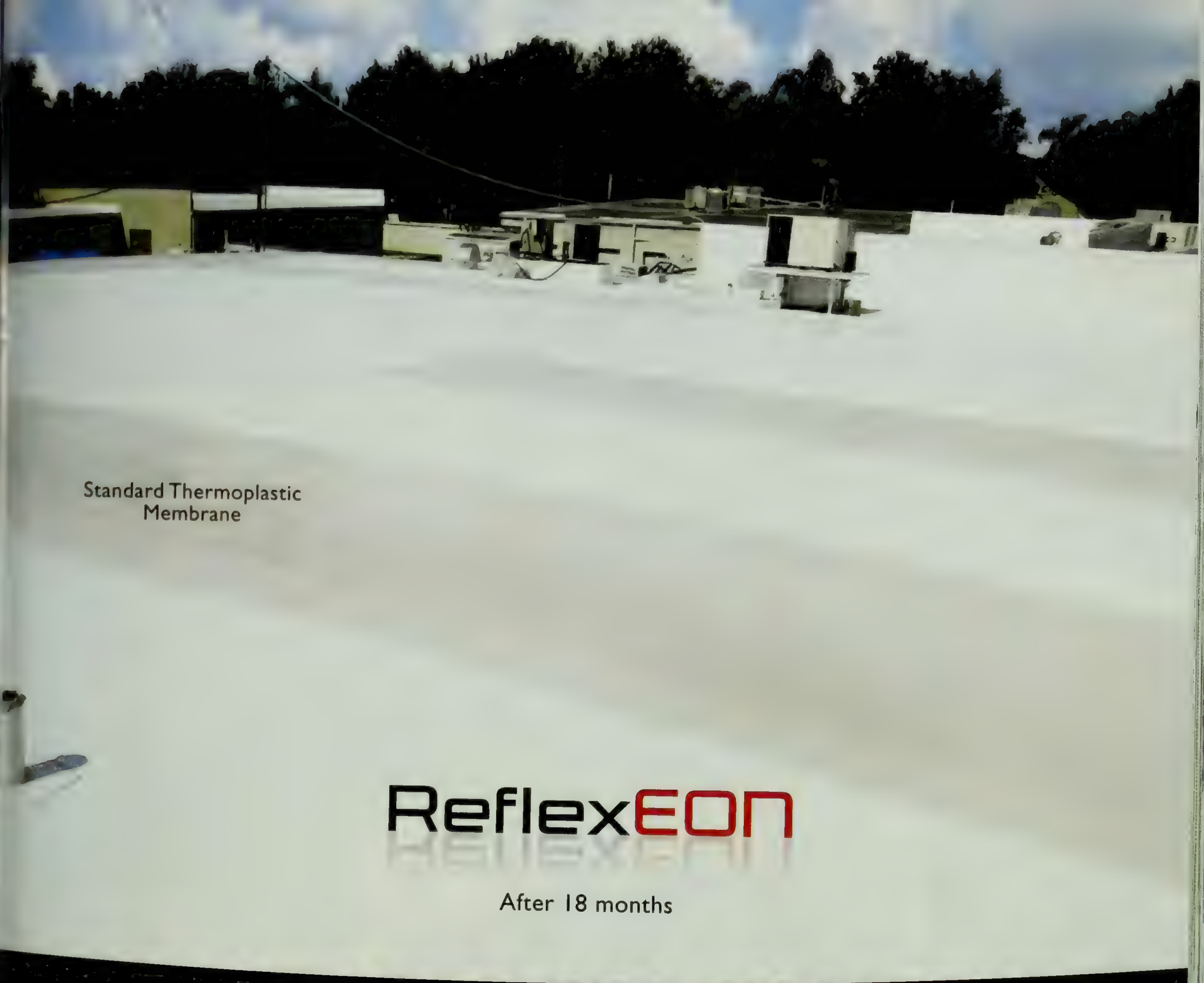

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sten. To yourself. This month, archrecord2 focuses on two architects who followed their hearts. hile Matthew Hufft traveled a path that presented itself to him at age six, architect and real state management consultant Winnie Lee found her direction through the varied jobs that ame her way. Both architects discovered what makes them tick, and the results speak for emselves. Visit www.archrecord.com/archrecord2/ for more about these talented individuals.

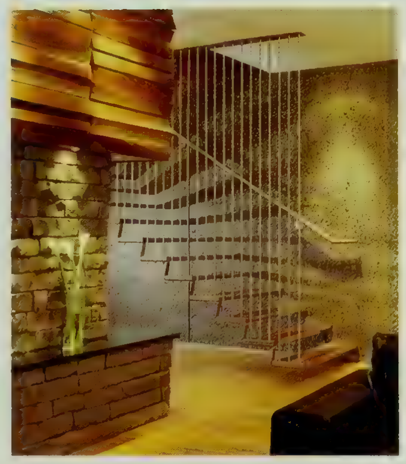
esign

ufft:Projects shows the show-me state

Sometimes you're just born with it. Matthew Hufft, principal of architecture firm Hufft:Projects in Springfield, Missouri, and New York City, says his parents recently uncovered a time capsule he had put together as a child. "It's a tape with my six-year-d self saying I wanted to be an architect," he says.

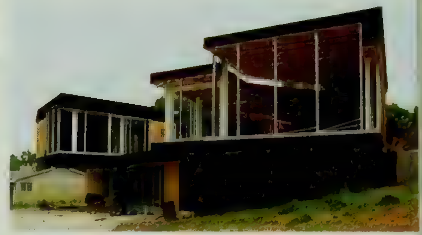
Those same parents—whose son by the age of 10 could either ild a fence or demolish a barn with a chain saw, a hammer, and ils—eventually became Hufft's first client. Hufft had been working Tigerman McCurry Architects in Chicago after receiving his B.Arch. m the University of Kansas in 2000 and traveling from Japan to lonesia studying Eastern architecture, when his parents, who lived in raditional farmhouse full of French Country antiques in Springfield, ocked him with a request. "I don't know how they got there—maybe cause of all the books I had brought home during architecture school—but y told me they wanted to go Modern," he says. "They were ready to get rid of the clutter and streamline their lives, and they asked me if I would design ir new house." The "Line House," as Hufft dubbed it, took three years to cre- . "I was so naive," he says. "The house went from 16 drawings to 50. It's due the patience of my parents and the contractor, whom I still work with, that it came together." The design is based on two concepts—configurations of a e, made most prominent by a retaining wall that was needed because of the ped site, and the idea that the house would be split into three separate sec- ns connected by that line. Thinking, doing, and living cur separately in this house, as the library, workshop ifft's father loves carpentry), and living areas have ir own individualized environments, with the wall in nmon. Hufft admits the project was a lot to take on, since its completion, it has served a purpose greater n just providing a happy home for his family. "Most of clients I've had go see the house before hiring me," says. "It's become a calling card."

As an example of what Hufft can do, the house surely



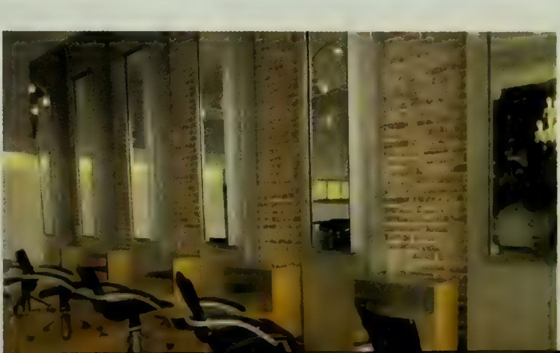
Line House, Springfield, Mo., 2005

A retaining wall was essential for this home, built on a steep site. Designed of exposed concrete and modular block, the house separates activities of everyday life into individualized environments (thinking, doing, living) connected by "the line."



The Residence, Springfield, Mo., 2006

This home was conceived as two tubes, one for entertaining and one for sleeping. The structure is made of prefabricated steel and concrete, with a solid side that faces the neighborhood and a transparent side facing a lake and trees.



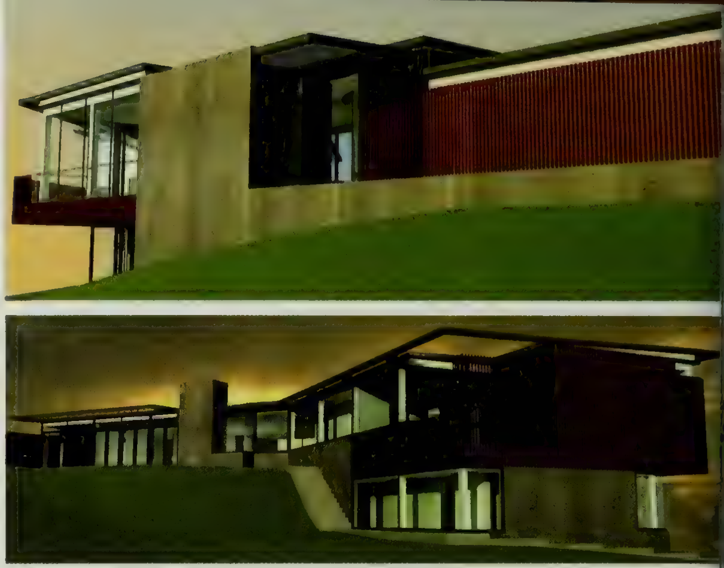
Studio 417, Springfield, Mo., 2006

This face-lift for an urban salon called for replacing storefront windows with a large glass curtain wall, and a staircase of painted steel and acrylic that appears to float over the reception desk.

delivers. He moved to New York City in 2001 to get an M.Arch. degree from Columbia University, then went to work for Bernard Tschumi Architects until last year. Now on his own, he has remained in New York to be on the pulse of the design scene, yet all of his current work is in Missouri. "Missouri is the land of awesome opportunity," says the architect, who runs an office of four people. "It feels like unexplored territory, while New York is the land of inspiration and community." Hufft currently spends three weeks in New York City and one in Kansas City, Missouri, but has plans to flip that and eventually move to Kansas City full time. "I like that in Missouri I can build things from the ground up," he says.

And while his residential clients continue to recommend him to their friends who own businesses (he recently renovated a salon and will soon break ground on a 25,000-square-foot shopping complex in Springfield for which he hopes to achieve LEED Gold status), he's also working on establishing a bathtub-fixture company called Edwin, from his middle name. "For every problem, there's a solution," says Hufft, who has found a few solutions he thinks Edwin could share with the public. Keep an eye on this one—he's now armed with more than a chain saw, a hammer, and some nails. *Ingrid Spencer*

For more photos and projects by Hufft:Projects, go to archrecord.construction.com/archrecord2/.



Kuntz Residence, Springfield, Mo., ongoing
To conform to the sloped site, this home for a family of five elbows 45 degrees. The facade will resemble two undulating ribbons: poured-in-place concrete with punched windows on the ground level, vertical cedar siding that runs onto the decks on the second story. The roof appears to float on a steel channel above the third, glass-walled floor.

Work

Winnie Lee: Designing a career in business

Architect and real estate management consultant Winnie Lee.

Like most young architects, when Winnie Lee, AIA, graduated with her B.Arch. from Carnegie Mellon University, in Pittsburgh, she imagined a future world full of buildings of her design. And despite her architecture professors' advice to graduates to "cast a wide net" during the economically turbulent 1990s, Lee went to work for a small firm in Chicago. From that point on, however, she kept an open mind about her career, and 10 years and one M.B.A. later, she works in corporate real estate, as a management consultant for massive global management consulting firm Deloitte Consulting in Chicago.

"I currently provide consulting services to corporations with capital assets," says Lee, "and focus on areas such as portfolio management, facility strategies, and capital construction." A far cry from designing buildings, but for Lee, it seems not only satisfying, but a better fit for her personality. After graduating, she worked for a firm that was looking for ways to expand its services, and Lee was put on a project to digitize property asset information for clients. She found that she had a natural inclination for the diligent, systematic organization involved. "It was my entry into this world called real estate," she says.

From there, Lee was offered a job in New York City for a hospital's facility management department. Run like a studio, it was morphing into an atypical model—the architects in the department were the architects of record for expansion projects, and they managed projects and real estate much the way Lee had experienced at her previous job. "I transitioned with my jobs," says Lee. "And I realized that I enjoyed the management side more than getting my hands dirty. Most architects want to see their designs materialized, and they have to 'sell' their ideas to clients. I found that on the management side I had more control of the outcome.

A few years ago, Lee went back to school, getting her M.B.A from the Ster School of Business at New York University. Armed with a knowledge of building technology and design, facility management, as well as business and finance, she joined a large firm doing predesign work emphasizing the business case of why and how much a company should build, divest, or lease. From there, she moved into corporate real estate.

Despite the pressure of often being "the only woman in the room," and the acknowledgement that some business environments are less supportive of employees having lives outside of the office, Lee enjoys the work and the salary (Lee quoted a recent *Wall Street Journal* salary survey that says M.B.A. graduates going into corporate real estate can begin with a salary range starting at $80,000), and she defies a common accusation that success on the business side of architecture comes with a selling of the soul. "I'm giving high-level advice to very sophisticated clients," she says. "The bottom line is important, but unethical recommendations aren't even on the table. There are pluses and minuses, but I have never had to recommend anything that I know is wron We as architects have to put together a case, then speak the clients' language and quantify our recommendations in terms they understand. That's the challenge. I give subjective recommendations supported by objective data."

And while she has no regrets, Lee still feels a bit as if her career happened to her, rather than the other way around. She has this advice for architecture students: "Know your strengths, be mentally prepared, and check in with yourse along your path. If I could go back, I would tell my earlier self to explore differen opportunities and be more aware of my career. If I had, nothing might have changed, but I wouldn't wonder where life might have taken me." *Ingrid Spence*

For more information and salary comparisons between architect and consultant jobs for recent graduates with B.Arch. or M.B.A. degrees, visit archrecord.construction.com/archrecord2/.

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Living the green life: A quest for affordable and beautiful sustainability

Exhibitions

By Andrea Oppenheimer Dean

he Green House: New Directions Sustainable Architecture & esign. *Curated by Donald Albrecht. t the National Building Museum, ashington, D.C., until June 3, 2007.*

The walls between high design and nvironmental responsibility are rumbling," contends Chase Rynd, irector of Washington, D.C.'s ational Building Museum—and he as a point. Such leading architects s Renzo Piano, Glenn Murcutt, engo Kuma, and Herzog & de leuron have recently incorporated gnificant sustainable features into eir designs. As Rynd sees it, onsumers now want their prod- cts not only well designed, but so ecologically benign."

The museum's *Green House: ew Directions in Sustainable chitecture & Design* is, in part, a ts-and-bolts primer for architects d builders, as well as homeowners, ho may want to make their houses ore environmentally responsible. e museum set out, according to ynd, to illustrate that residential sign can be "beautiful, affordable, d sustainable." As Donald Albrecht, e show's curator, puts it, "Going een no longer means going weird living in a house of recycled tires."

The exhibition begins with a full- ze, furnished mock-up of the main ing area of the prefab Glide House, signed by California-based ichelle Kaufmann for a site, says e catalog, "anywhere." The interior Modern but welcoming, and most useum visitors will easily imagine emselves living there. Which is pre- sely the idea: to persuade the

California-based Michelle Kaufmann designed the prefabricated Glide House (above) for a site "anywhere," according to the exhibition catalog. The show includes a mock-up of its main living space (rendering, top).

Tasmania's Walla Womba Guest House by 1+2 Architecture (2003), raised on a steel frame, treads lightly, preserving the woodland's natural drainage patterns.

not-quite-yet converted. Glide House, named for its sliding south-facing glass wall with movable louvered screens, is configured to amplify breezes and, with a north-facing clerestory, reduce the need for electric lighting. The key features include: flooring of fast-growing (i.e., replenishable) bamboo, carpet tiles of such recycled materials as polyester and nylon, walls finished with paint low in volatile organic compounds (VOCs), countertops of recycled paper, furniture of sustainably harvested or reclaimed wood with organic upholstery, and only energy-thrifty appliances. Glide House is factory built—hastening production, reducing waste materials, and providing strict quality controls—and can be customized for each locale and client. Ten versions have been constructed, with more on order. At $120 per square foot, totaling under $200,000 for most versions, they cost $83,000 less than the average American home in 2005, according to exhibition literature.

Next, visitors enter a gallery of graphic panels and hands-on displays elucidating five green principles: wise land use; attunement to the sun; high-performance energy efficiency; improvement of indoor air-quality; and judicious approaches to the earth's resources. A heliodon (or sun simulator) shows how solar rays affect a house during different times of day and seasons.

A third gallery displays 21 contemporary green houses from around the world. The high quality and range of expression affirm Rynd's contention that the clash between environmental responsibility and high design has been resolved. The houses are organized according to location: desert, waterside, forest/mountains, tropics, suburb, and city. Some examples, rooted in the vernacular, apply such age-old materials as adobe, in new ways. Other projects incorporate new materials and technologies, such as the House with Shades (2000) in Jebenhausen, Germany, by Achenbach Architekten + Designer. Here, light and wind sensors regulate a retractable, textile shading system.

For the average homeowner, the Materials Resource Room is particularly compelling, with its 60 or so samples of green materials: carpet, flooring, paint, concrete, metal, and wood, all chosen for "availability, affordability, and good looks," says Albrecht. The idea, adds Rynd, is to "make environmental responsibility utterly unremarkable—an integral, if not always obvious, aspect of design." The samples show "you can start small," says David Lewis of Lewis.Tsurumaki.Lewis, the installation's designers.

The final gallery returns to the Glide House via video, showing the architect talking about her own home, one version of the Glide prototype. This gallery also revisits the principles of sustainability graphically, while Post-It-type notes pepper the walls throughout the show, defining such buzz words as "reusability" and offering tips for resource conservation.

Here is a major museum show addressing the consumer with an underlying mission to hook new believers. The bait combines good taste and common sense with accessible, handsome images and products, as well as HGTV-type tips. For those interested in greening their homes, the presentation instructs without preaching or preening. While the exhibition offers few new ideas for the initiated, its strength lies in its essential intelligence and lovable examples.

Finally, visitors receive the take-home *Green Resource Guide*, listing the show's lessons and displayed materials or products, as well as contact information for green resources, advocacy groups, and the featured architects. Consulting curators Alanna Stang and Christopher Hawthorne have produced an excellent book to accompany the show. After it closes in D.C., *The Green House* may travel to other cities, such as New York, Atlanta, Los Angeles, and Chicago. ■

The show's Materials Resource Room (right) features samples of green materials: carpet, countertops, flooring, paint, concrete, metal, and wood.

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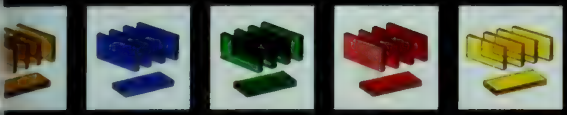

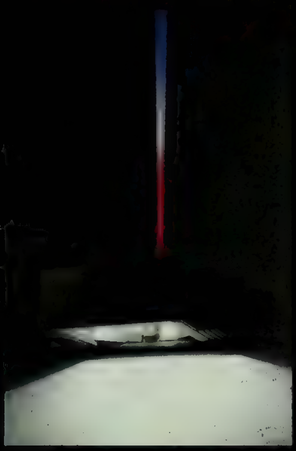

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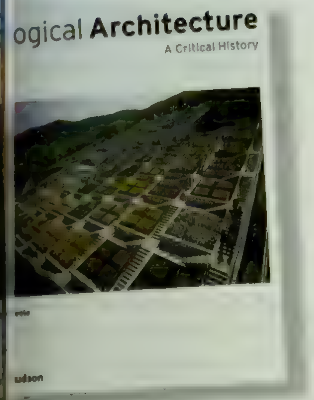
RHEINZINK

Looking at green design from a variety of perspectives

Books



**ological Architecture: A
itical History,** *by James
eele. New York: Thames &
idson, 2005, 272 pages, $55.*

nes Steele is staggeringly prolific,
h more than 20 books to his
me in the past 10 years, including
thoritative and engaging volumes
subjects from transportation to
tting-edge design. *Ecological
hitecture*, a selective and often
lemical history, views sustainabil-
as extending to a "larger
cioeconomic awareness of global
sponsibility." It serves as a sort
synthesis for much of Steele's
ent work, which includes vol-
ies on Egypt's Hassan Fathy,
dan's Rasem Badran, India's
lkrishna Doshi, and the contem-
rary mosque.

Here, Steele singles out
hy for offering his country a
turally based alternative to the
ernational Style, Badran for pro-
ting Fathy's ideas on a larger
ale, and Doshi for having "trans-
ed Le Corbusier into a regional language." Steele focuses on the vernacular as a repository of ecological wisdom, and on the Islamic world because "for practical as well as religious and social reasons," it has been quick to reestablish connections with its vernacular.

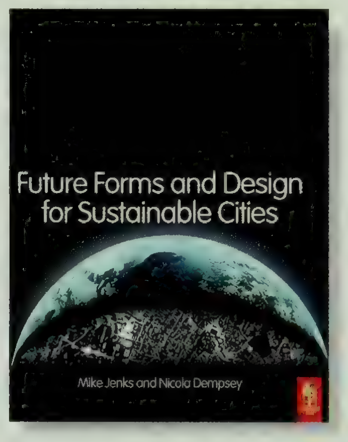
But tradition is only one of Steele's themes; the other two are technology and urbanism.

Rather than viewing technology and tradition as opposites, he sees them as inextricably linked, since tradition represents the accumulated knowledge of past generations. When it comes to urbanism and its future, he believes a car-based (perhaps electric car) existence, tethering workers to offices all day and returning them to "dormitory communities" at night, "is much more believable than the romantic vision of the future painted by the New Urbanists."

Steele offers a lengthy section on leaders of the green revolution, starting with Charles Rennie MacKintosh (the subject of a 1994 book by the author), whom Steele credits with reconciling the Arts and Crafts ethos with the machine age, "while incorporating the lessons of Scottish vernacular architecture." Nationalism, or a quest for national identity, Steele contends, is invariably linked with ecological thinking. The author brings some aspects of Modern architecture, including Le Corbusier, under the ecological umbrella.

In a final section, Steele writes about three promising shifts in attitude: "digitizing the environment," which allows architects to develop forms closer to nature; "perfecting nature," by building with restraint and respect for nature, in the tradition of Tadao Ando; and the greening of cities, as is happening in Los Angeles (about which Steele authored a book in 1998).

But Steele ends on a deeply pessimistic note: "Identity as a connection to place is no longer determined by tradition and is increasingly related to imageability, the life-changing legacy of the electronic age, so that the final distancing from nature is under way." *Andrea Oppenheimer Dean*


Future Forms and Design for Sustainable Cities
Mike Jenks and Nicola Dempsey

Future Forms and Design for Sustainable Cities, *edited by Mike Jenks and Nicola Dempsey. Burlington, Mass.: Architectural Press, 2005, 444 pages, $35.*

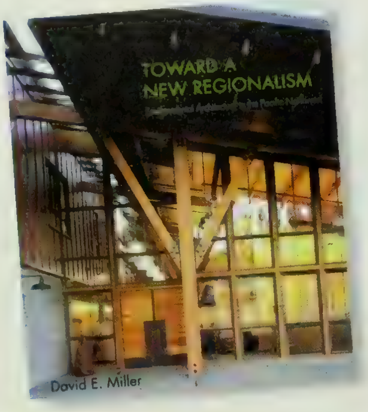
How cities might become more sustainable is a question with as many answers as there are definitions for sustainability itself. For this collection of papers, Jenks and Dempsey define sustainable cities broadly, as "economically viable, socially equitable, and contribut[ing] to environmental protection of all species." The book looks at current sustainable thinking around the world.

The "future forms" in the title refers to forms of planning and development. Most of the 33 contributors are academics, and European research predominates. So American readers may be disappointed that few of the case studies at the end of the book are from their part of the world. Articles such as the one by Beverly Willis on public participation and Lower Manhattan also suffer from the absence of voices from the cities under discussion.

The subjects tackled by *Future Forms* include the relationship of spatial concepts to urban and regional sustainability; the challenge of measuring and defining density; the effect of social issues (such as work patterns) and resource issues on sustainable development; and the critical connections between public policy and spatial design.

No easy solutions are proposed for creating sustainable cities. Rather, the authors offer a laundry list of strategies: encouraging "polycentric urban forms" linked to transportation; increasing density; designing buildings to take advantage of solar energy, new technologies, and knowledge about life-cycle development; and building communities that "enable accessibility and sustainable behavior and involve the people who live there."

Future Form's strength is in its breadth. As American designers and planners struggle to think beyond purely technological solutions, the book's research into the human and social issues will help them in this task. *Kira Gould*



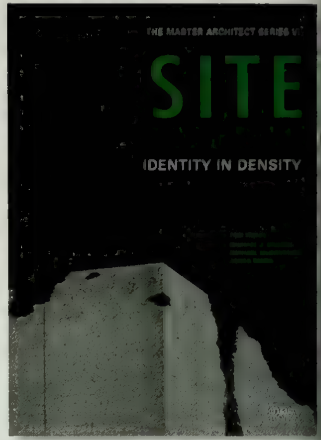
Toward a New Regionalism: Environmental Architecture in the Pacific Northwest, *by David E. Miller. Seattle: University of Washington Press, 2005, 174 pages, $19.*

The obvious problem with this book is its ambition, evident in the title, echoing Le Corbusier's famous *Toward a New Architecture*.

Miller's aim is to derive a blueprint for sustainable design from Pacific Northwest regional architecture. Contending that the origins and development of modern green architecture "lie in the essential principles of Modernism," which the Northwest adopted and adapted, the author investigates geographic and climatic conditions that define the Northwest style. He equates the Northwest's architecture of wood, dramatic uses of landscape, and manipulation of light with early Modernism and calls these features "the basic building blocks of sustainable design." Add technology, he says, and you "have the opportunity to bring these elements together into a comprehensive design approach."

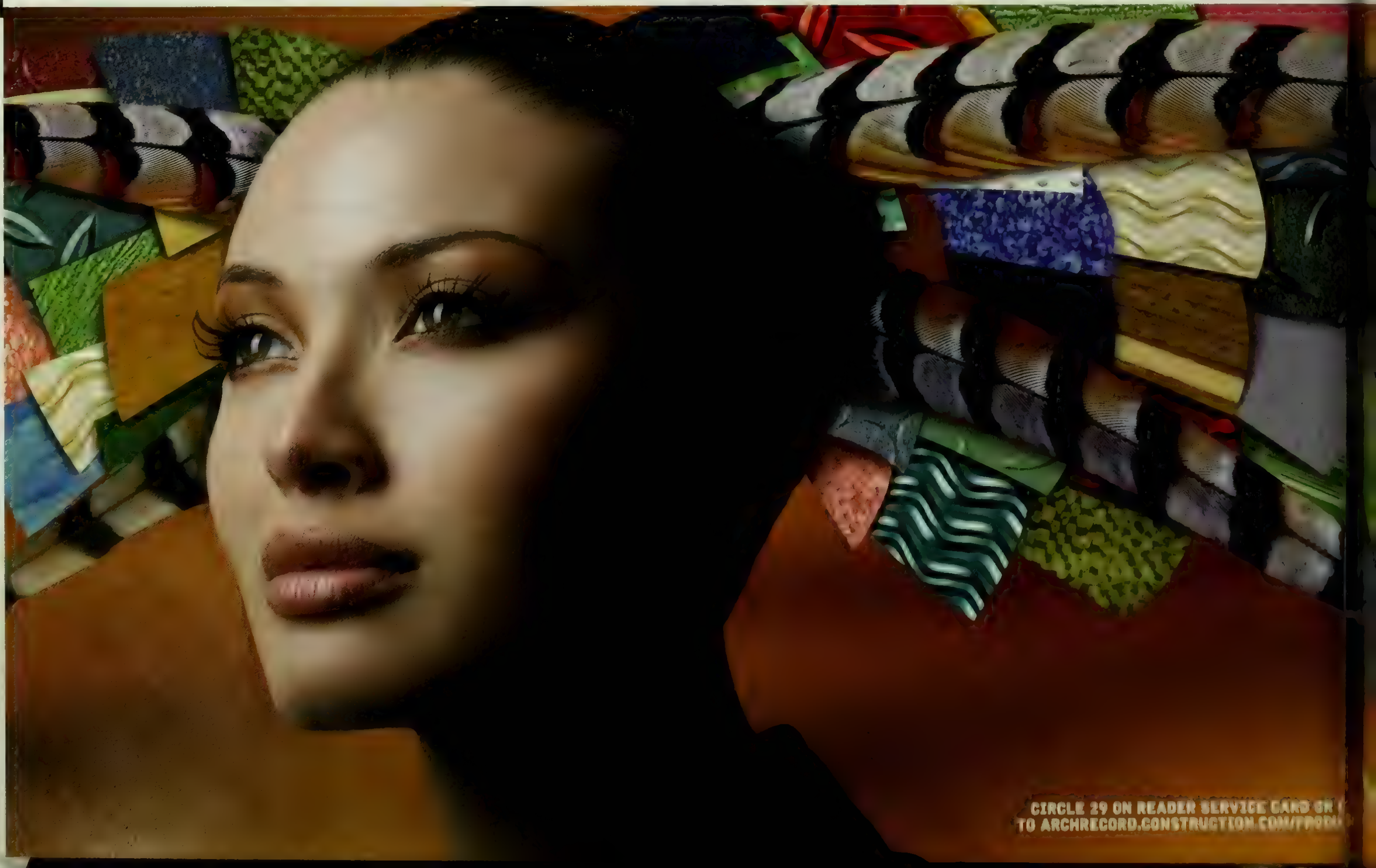
True, but perhaps not everywhere. Northwest regionalism will offer few lessons for sub-Saharan Africa or southern California. Like his thesis, Miller's language lacks finesse, but his book offers a good illustrated survey of sustainable design in the Northwest, including a brief history and a rundown of often-used strategies, such as earth sheltering, passive solar design, daylighting, and photovoltaic systems. The book offers examples of large buildings that use their site wisely, buildings of light construction that conserve resources, buildings that are models in admitting light and ventilation, and buildings for the future that integrate technology with older strategies. *A.O.D.*

SITE: Identity in Density, *edited by Steve Womersley, with a foreword by Tom Wolfe, and essays by Michael Crosbie, Michael McDonough, and James Wines. Easthampton, Mass.: Images Publishing, 2005, 253 pages, $65.*



The redoubtable Tom Wolfe writes in a foreward that SITE and its founder James Wines "have their high-intensity eyes fixed upon the Green ground, figuring God is more likely to be found in the sod than in a to-the-rear march back into the miserly, constipated bowels of the Bauhaus." Opposition to Modernism energized SITE from its beginnings and remains a spur to Wines's fecund intellect an projects. "The orthodox Modernist imagery still being used is increasing irrelevant in this disordered, pluralisti world," he writes.

SITE burst onto the scene in th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970s with a series of showrooms r Best Products that foreshadowed any of today's trends, including the ematerialization of buildings, bring- g nature into transparent buildings, nd merging buildings with their nat- ral surroundings.

In recent years, Wines has harpened his focus on ecological rchitecture, lamenting here in an ssay from 2000 that so-called reen architecture merely tacks a hecklist of environmental and land nservation strategies onto con- entionally designed buildings and ndscapes. Architecture remains nthroned as a sculptural center- ece," he writes, and landscaping "reduced to a girdle of lollypop ees." He calls for more poetry in rchitecture and for recovering hose fragile threads of unity, hich Heidegger called 'connected- ss to the earth.' " Wines ruggles valiantly to enunciate d shape an architecture for our nes, which he calls the Age of formation and Ecology.

This survey of SITE's ideas and projects revisits some material included in earlier publications by and about the firm. Which is all right: It's nice to have SITE's work and Wines's spirited, clearly expressed ideas and superb drawings in one place, complete with lists of projects, staff members, and publications by and about his firm. *A.O.D.*

Ken Smith Landscape Architect: Urban Projects, *edited by Jane Amidon. New York: Princeton Architectural Press, 2005, 176 pages, $30.*

The second in a series of books presenting single projects or groups of related work "significant to the practice and study of landscape architecture today," this book aims to give readers "a sense of the project from start to finish," and to see "early concepts that persist into built form as well as the ideas and methods that are shed along the way." Using these criteria, this work succeeds.

The book presents three projects all in New York: the Museum of Modern Art's roof garden (2002–05); East River Ferry Landings (2000–05); and P.S. 19 (2002–04). You might argue that two of three aren't "significant": The East River project is an installation of plants meant to replicate the riparian landscape, and P.S. 19 is an intervention with colorful graphics, plantings, and a scrim-covered fence at a school in Queens. They are creative solutions but hardly paradigm shifts. On the other hand, the MoMA garden—an installation of plastic rocks and trees, crushed glass, recycled rubber, and pebbles—though not open to the public and visible only from adjacent high-rises, is an important work that artfully resolves a challenging program.

The text provides chronological data for each project and "conversations" with Amidon reveal Smith's design approach—an emphasis on public space, the "social aspects of design," and "ecology and environmentalism ... as an artistic instrument"—and his reflections on the three projects. The book is well designed and offers excellent images.

Critic Nina Rappaport's concluding, brief essay, however, borders on effusive artspeak.

Smith worked in Martha Schwarz's office when she partnered with Peter Walker, and he shares their approach, which emphasizes collaborative planning and public participation, nontraditional materials and found objects, irony and cultural comment. This monograph documents at least one project that represents how the profession is being reimagined and reinvigorated. And that merits attention. *Lake Douglas*

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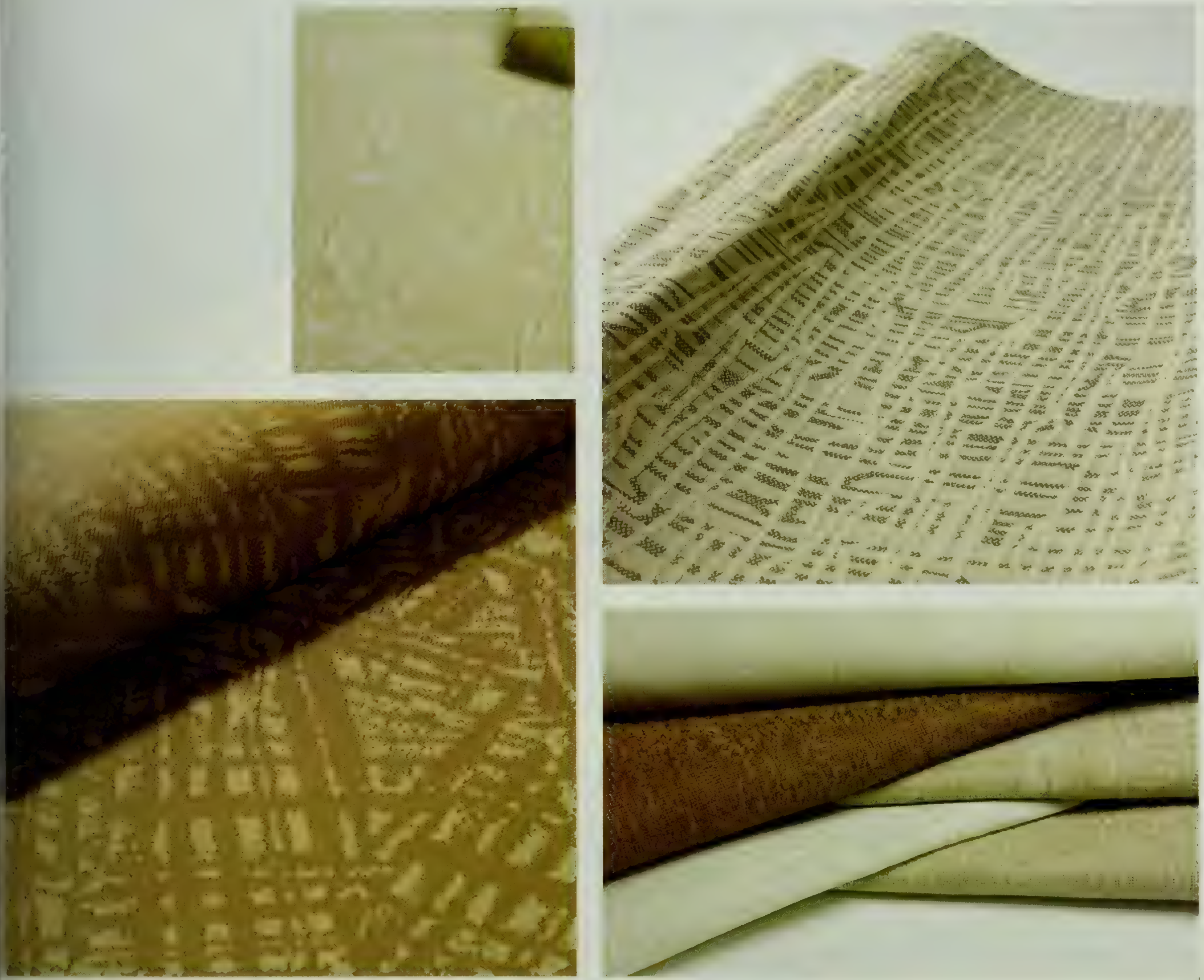

Rita Catinella Orrell

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**ckwise from top left: Designtex's 180 Walls collection includes Riviera, a bold, swirling scroll motif (with a corner peeled
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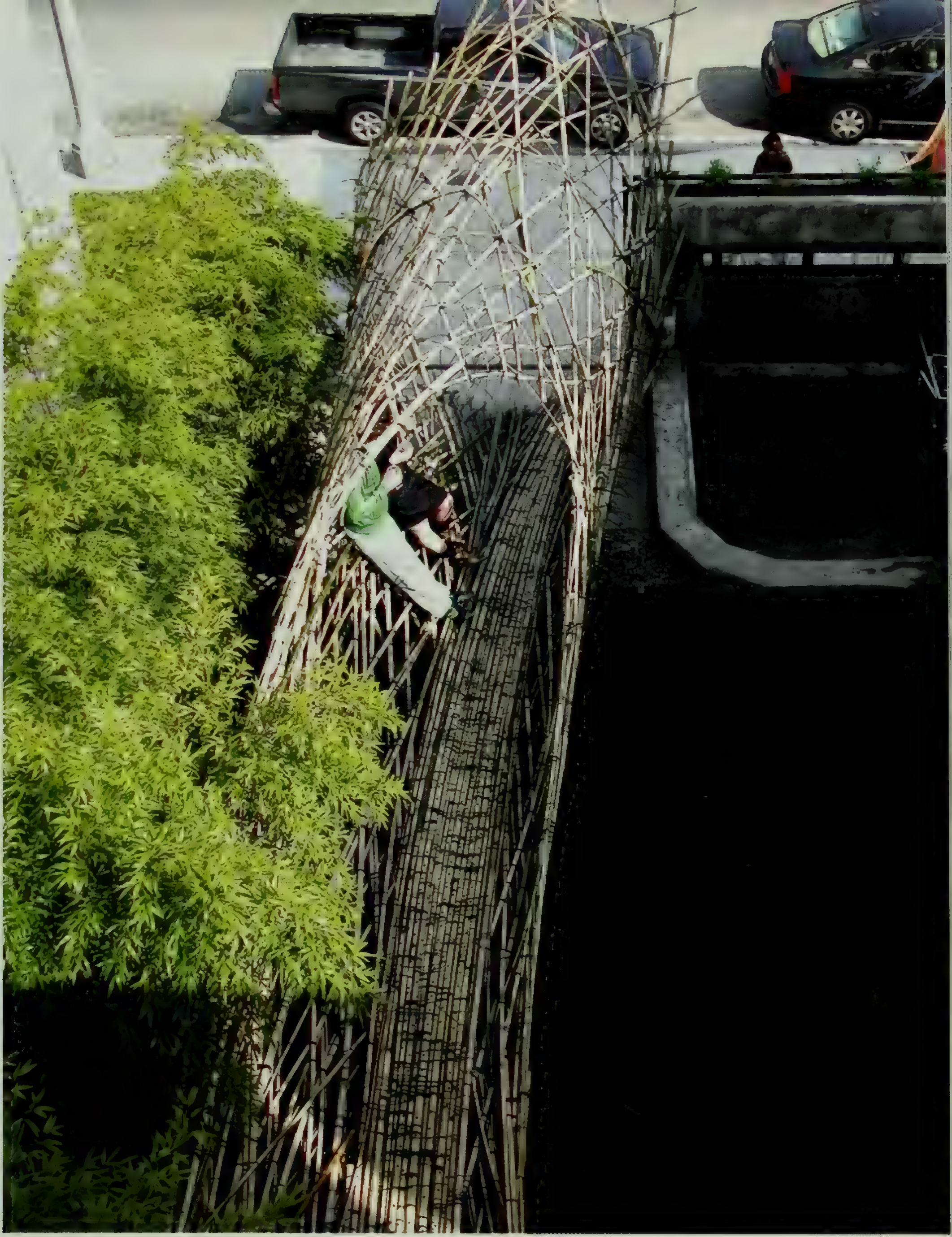
Snapshot



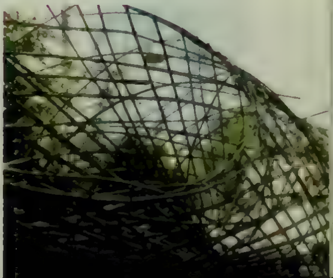
y Beth Broome

A bamboo tube leads into the great unknown

ading off Los Angeles's Silver Lake Boulevard, a weblike bamboo bridge ansports visitors out of traffic, over monster-infested waters, and into a rreal, miniature universe.

The work of a Los Angeles design collaborative called Workshop vitas, the bridge, created with advanced design tools and eco-effective aterials, aspires to the collaborative's mission of exploring the built world from a perspective of lightness. Delicate appearance yet robust in character, the structure does, indeed, appear to defy gravity.

Part of an installation by design group *infranatural*, at Materials & Applications, an architecture research center, e bridge traverses the center's courtyard, which over the spring and summer has been flooded with rain water llected from the building's roof. The temporary body of water plays host to a gaggle of "monsters," a system of bmerged, computer-controlled jets that lurk in the water, occasionally jumping above the surface. The bridge leads itors over and into the installation, providing them with a stage from which to interact with the creatures below.



Snapshot

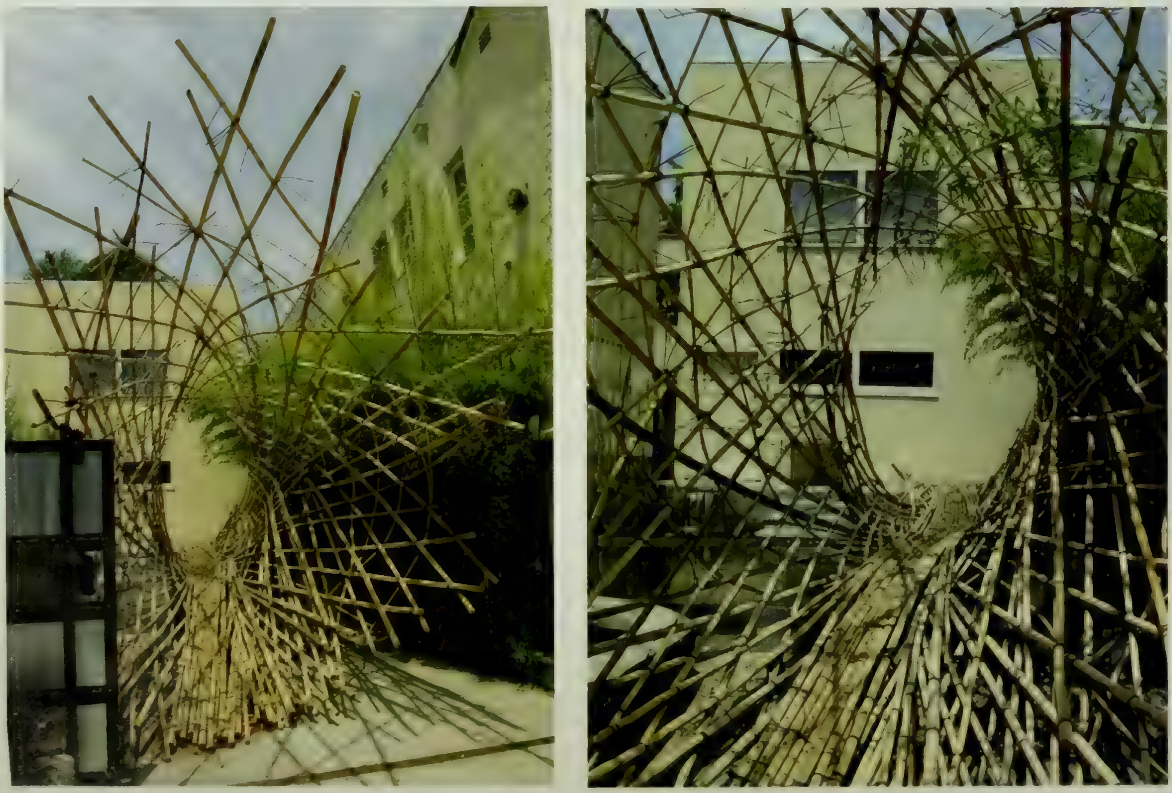
Chosen for its sustainable properties, the bamboo was harvested by Workshop Levitas from the Los Angeles County Arboretum and Botanic Garden. Rather than clear-cutting, the group trimmed the forest with the arboretum's blessings. "The bamboo grows so fast, if you don't cut it back it will kill itself," says Workshop Levitas's Shu-Chi Hsu.

Like the untreated bamboo itself, the structure's design process was organic. The design was inspired by structural/moment diagrams drawn by structural engineer Bruce Danziger. Hsu and Moritz Freund, both emerging architects, together with Danziger, designed the tubelike form using Rhino software. In the end, however, the bamboo took its own form. "Each piece of bamboo has its own way of bending," explains Hsu. "The bridge becomes itself, freeing itself from the computer model. The computer rendering is just a concept."

The choice of bamboo as a building material also contributes to the constantly evolving environment of the overall installation. At first green and relatively supple, the shoots have browned and stiffened over time, causing the bridge to transform in appearance and form over its short life span. "*infranatural* asked for a bamboo bridge," says Danziger. "We gave them that, but also something that works with the composition of the whole space and creates an experience in and of itself."

But the bridge is not the end of the line for these bamboo sticks. In yet another nod to green practices, when the installation concludes later this summer, Workshop Levitas plans one more reincarnation for their building material: It will take on a new life as furniture, perhaps as a giant outdoor sofa. ■

The bridge, made from approximately 150 locally harvested bamboo shoots and connected with 2,000 cable zip ties, can be seen from the street, inviting passersby to enter this experimental space and interact with the entire installation.



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An architect can't turn over a mossy green rock today without finding the word sustainability *written under it. Thirty years ago, few in the building industry considered "ecologically responsible" design much more than some geodesic domes on a commune in Northern California. By July 2006, more than 550 million square feet of commercial building was registered or certified with the U.S. Green Building Council's LEED certification process. Green policies in cities and states continue to expand their influence, from rooftop solar and wind turbine programs in Chicago to California's LEED Silver state building initiative. Manufacturers persist in rolling out at a dizzying pace new products pushing the limits of energy efficiency, recycled content, and conservation.*

This year, Al Gore's documentary film on global warming, An Inconvenient Truth, *and the PBS series on green building,* design:e^2, *raised issues that have touched a nerve with receptive audiences. All indications suggest 2006 as a benchmark for the sustainability movement, in terms of the design and construction industry, as well as public awareness.*

Yet we haven't seemed to have reached what writer Malcolm Gladwell calls the "tipping point." As consumers, we want to buy less, but consumer spending is still up for 2006, though factoring out pricey gas purchases, there are signs of a slowing. As architects, we want to design better buildings, but LEED-rated buildings represent a mere fraction of a percentage of overall building in the U.S. (To put it in perspective, Wal-Mart opened more than 3.2 million square feet of new buildings in the U.S. in June 2006 alone, though even that conspicuous-consumption behemoth has begun to consider building sustainably.) Furthermore, the establishment of separate green architecture academic programs, the most recent of which was at Yale, gets it exactly wrong: Sustainability should be integrated throughout the field, not offered as an elective curriculum. What will it take for truly radical change? And when will it come?

RECORD *asked these questions, and others, of some key people in a variety of fields in the realm of sustainability, but all outside of strict architecture practice. In these areas, which include mechanical engineering, industrial ecology, and population-growth management, we see a fluid understanding of sustainability, one easily adapted to diverse working methods. We did not set out to achieve a comprehensive examination, but to take a wide view of a handful of provocative ideas. We feel strongly that innovation within the green architecture movement represents the best of the field; after much hand-wringing in recent decades about what to do with the failed project of the Modern movement, the mounting evidence seems clear.* Russell Fortmeyer

Interviews were conducted by Russell Fortmeyer, John Gendall, and Charles Linn.

Big Ideas for a Little Planet

RECORD asks leading voices
about the innovative ideas
shaping sustainability's future

Defining sustainability

John Ehrenfeld, who teaches at the Massachusetts Institute of Technology, speaks on his extensive writing about sustainability.

ARCHITECTURAL RECORD: *What is your definition of sustainability?*

JOHN EHRENFELD: I define sustainability as the possibility that human and other forms of life will flourish on the planet forever. Sustainability is a consequence of the culture, but it's accumulated over a long time. The modern, technological, objective world is about a lot of pathology that leads to many human and natural dysfunctions.

AR: *Why do you think environmental issues are still so up for debate in the U.S.?*

JE: Sustainability is a long-time, systems issue. The senior politicians in the U.S. have dissed this issue to some degree because we have a very simplistic political system now. The time constant of the press and the political system is in seconds, minutes, maybe hours, and it cannot deal with issues that are long-term, difficult to grasp or even perceive.

AR: *Do you think true sustainability is possible?*

JE: I think it's possible. No global society has come close to making the demands and stressing the global ecosystem the way we have today. The situation today is more tenuous than it was in the past. We need to deal with the symptoms of the dysfunction, like global warming, but that isn't going to bring us a sustainable world. It will prevent, perhaps, catastrophic change, but it is a reactive response.

John Ehrenfeld, executive director of the International Society for Industrial Ecology.

AR: *Many argue that innovation is a distinctly human quality that will advance sustainability.*

JE: People aren't inventive, they can't cope. Most people can't deal with life unless their technological things are working for them. Turn off one of those things and they are bored. Invention is being lost, and without that humans can't sustain themselves.

AR: *Do you think there is a "big idea" that will push the world into changing?*

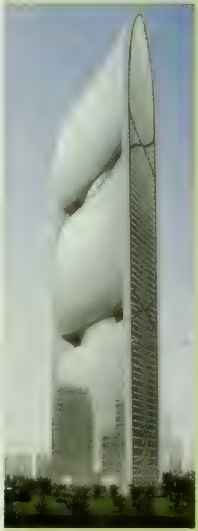
JE: It's going to happen one invention and one building at a time, but I'm confident that will produce better results than a grand plan. I'm putting my eggs in subversive projects. It's not about creating green buildings, it's about creating place. Sustainability is a systems property. Architecture is the closest thing we have to the whole world, so architects have been systems thinkers forever.

"Net" zero-energy buildings

Roger Frechette, director of MEP Sustainable Engineering at Skidmore, Owings & Merrill, Chicago.

AR talks to Roger Frechette about SOM's design for the 71-story, 2.2-million-square-foot Pearl River Tower in Guangzhou, China. The tower is designed to have a "net" zero-energy footprint, using a combination of strategies, including wind turbines, radiant slabs, microturbines, geothermal heat sinks, ventilated facades, waterless urinals, integrated photovoltaics, condensate recovery, and daylight responsive controls.

ARCHITECTURAL RECORD: *What is the biggest technical challenge you need to overcome to make a "net" zero-energy building?*



Pearl River Tower, Guangzhou, China.

ROGER FRECHETTE: Trying to design a low-energy-consuming building in Guangzhou is very difficult. It's a harsh environment with respect to indoor air quality, heat, and humidity. We know if we can make it work there, we can make it work anywhere.

AR: *What was unexpected about the process of designing the Pearl River Tower?*

RF: We had the notion that we could capture wind energy as one of the many energy strategies in the building design. The building's facade was formed to accelerate the wind as it moved through the opening in the building. We had estimated that we could increase the wind velocity to 1.5 times the ambient wind speeds. As the design advanced, we tested our building model in a wind tunnel. We were pleasantly surprised to see that not only did the wind accelerate as we had hoped, but in some cases it reached 2.5 times the ambient wind velocity. Because power potential is the cube of wind velocity, this strategy will yield power well beyond our original estimates. Our "building-embedded" wind turbine could generate power 15 times greater than a "freestanding" turbine.

AR: *Do you consider this a prototype for SOM's skyscraper designs?*

RF: I do not think the term "prototype" would be appropriate. The proper approach is to truly understand the uniqueness of environment for each project. This Pearl River responds to the natural forces available in Guangzhou. Wind speed, wind direction, solar angles, air quality, temperature and humidity profiles all inform the design. Putting this building in a different environment wouldn't be appropriate at all.

AR: *What has been your overall strategy with the tower?*

RF: Our philosophy on the Pearl is to "blur the lines" between the traditional disciplines. We think of a conventional building as having architectural, structural, mechanical, and electrical systems as independent layers. The Pearl Tower project is a statement of integration. It breaks the rules. We have a building skin that generates power, a structural system that provides thermal comfort, and a mechanical system with sculptural qualities and aesthetic beauty. Each system of the building works in concert with the others and with the building's environment.

The future of energy use

Jay Stein, executive vice president, E Source.

Jay Stein, an energy industry researcher, reveals what it will take to make clean electricity competitive.

ARCHITECTURAL RECORD: *In the future, what's going to change about how we think about how buildings use energy?*

JAY STEIN: Well, I think someday small gas and oil burners, such as those found in furnaces and water heaters, will be viewed as uncontrolled carbon-dioxide emitters. I doubt the government will actually shut them down, but our society may choose to stop adding new ones to the network. When that comes to pass, the only external energy source for new buildings will be the electricity grid. Then, we'll rely on heat pumps to transform that electricity into comfortable space and hot water.

AR: *What's going to cause that to happen?*

JS: At some point, our society is going to regulate CO_2. I'm foreseeing a stage in which there aren't cheap carbon offsets and there's simply great pressure on the utilities to dramatically reduce their carbon emissions. The gas companies will have very few options, unlike the electric companies, which have many, like nuclear power, carbon capture and storage, and renewables.

AR: *Yet, there really isn't low-carbon electricity available today.*

JS: Higher costs because of carbon regulation combined with technological improvements in products like heat pumps and the plug-in hybrid vehicle will make the electric-utility industry competitive in sectors that it's been locked out of forever. The electric-power industry has many options that its competitors don't. The best thing is to have regulation that empowers these industries to be innovative.

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Managing population growth

Rogelio Fernandez-Castilla, director of the Technical Division of the United Nations Population Fund.

Rogelio Fernandez-Castilla discusses the challenges faced by the United Nations Population Fund, as well as architects and other agencies, for assisting developing countries in handling dramatic population growth.

ARCHITECTURAL RECORD: *What problems do cities in developing countries face today?*

ROGELIO FERNANDEZ-CASTILLA: Population at present is between 6 and 7 billion, but by 2050 it may be 8 billion plus to 10 billion plus, depending on how population is trending. The growth of urban areas is almost entirely in developing countries. If we repeat the patterns of urbanization that have been observed in Latin America in, say, Africa, we will have a disaster. The question is are we learning and taking measures to prevent the problems. The answer is no. In many countries, urbanization is something a country tries to avoid. But migration from rural to urban areas is going to continue. The concentration of slums in large cities could be handled more effectively if this migration process were planned for by governments.

AR: *How can a discipline like architecture address such a complex issue?*

RFC: At present, these urban settlements are growing in very environmentally fragile areas. For example, in many developing countries, newcomers to the cities with no place to live establish themselves at the margins of rivers and in areas that are more vulnerable to natural disasters, as well as where services are not available. If there is some kind of urban planning that faces this inevitable urban growth, where the government and society decides to reserve certain spaces where future development would be more affordable and less environmentally damaging, it would make a huge impact.

AR: *Is there a role for government-mandated population control in creating a more sustainable world? Can the earth possibly accommodate 10 billion people?*

RFC: If you look at the population sectors where rapid demographic growth is taking place, it is exactly in those population groups that lack information and lack services. The surveys that are being conducted—demographic and health—indicate that people in the poorest groups of society don't want the large numbers of children they have. There is a significant unmet need for contraception. The question is not to worry about population control to change the way these people behave. Their behavior is not something they have decided to adopt, but it is because they do not have the means to exercise their choices. Family-planning programs are heavily underfunded today throughout the world. It's not a question of having to convince people of radical population control methods, as in China or India, which have been criticized throughout the world, but rather to provide additional education, information, and services for those who would like to postpone their next birth or would prefer to have fewer children.

Greening the landscape

Margie Ruddick, principal, Wallace, Roberts & Todd, Philadelphia.

Margie Ruddick, a landscape architect, discusses her experience incorporating sustainable design strategies into a variety of urban and rural landscapes.

ARCHITECTURAL RECORD: *What is your definition of sustainability?*

MARGIE RUDDICK: No one really knows what it is. It's something that people recognize, but it's still not that clear. People have ideas about its very basic principles: It is about minimizing impact and thinking about systems, about integrating environmental health with social and economic sustainability. Anything that involves more than what is needed is unsustainable.

Some practices have internalized sustainable design. For example, using sustainable urban drainage is becoming the norm. I have built a reputation for sustainability, but that all started just because of a low budget. I was working on a 2.5-acre, $700,000 project. Because of the budget, it had to be an innovative, low-maintenance, local-material project. It just happened to be that ultimately these practices became more recognized as sustainable design.

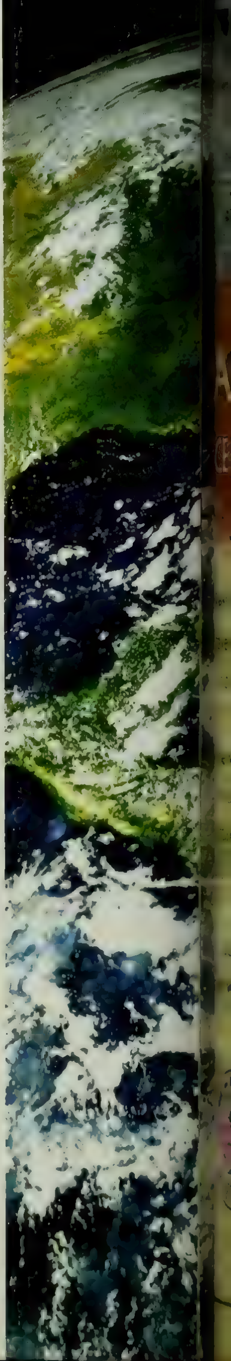
AR: *What is the role of landscape architecture in sustainable design?*

MR: Landscape architects used to be brought in after the architects had done the planning work. Now we're brought in at the outset to look at siting and planning and the underlying site structure.

AR: *Have there been surprises in recent years for sustainable practices?*

MR: When you get excited about sustainable design, you think you can have a perfect solution, you can create a closed-loop system where everything is off the grid. The assumption that you're going to find a solution has been questioned. Other considerations must involve an economic or programmatic sense.

So what has changed is the assumption that you're going to be able to do it all. We must acknowledge that we're consumers, that we're going to do damage, but figure out how to minimize the damage. But whatever it is, it must involve a lot of local input.



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Engineering the climate

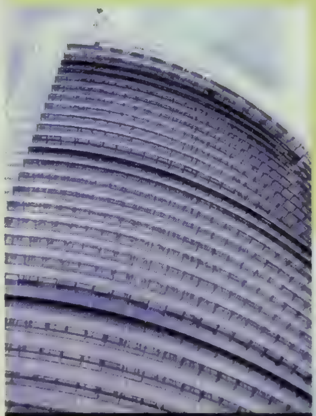
Mechanical engineer Matthias Schuler, who contributed to the 2003 book *Transsolar, Climate Engineering*, argues for shifting our thinking about low-energy building projects. He was involved in the Deutsche Post Tower in Bonn, Germany, with Murphy/Jahn architects [RECORD, May 2004, page 96].

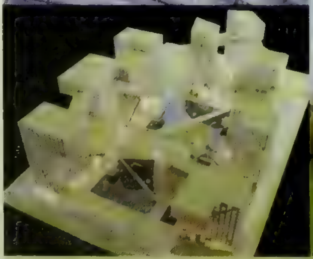
ARCHITECTURAL RECORD: *What is climate engineering?*

MATTHIAS SCHULER: We define it as high comfort, low impact. We are mostly mechanical engineers and physicists, so we are approaching this by rethinking everything as basic physics—using basic physical phenomena to improve the comfort of people with their environment, while doing this with the lowest consequences for the natural environment. You have to do this in an early stage with the architects in a close collaboration. Architects feel this supports and pushes their design; they don't see it as a restriction.

AR: *You write in the book that you consider climate engineering a discipline within architecture. Can you clarify what that means and how that relates to conventional consulting engineering?*

MS: We see it as a discipline with the entire design team, not necessarily within architecture. Climate engineers take a holistic approach. In a certain way, they are trying to pull together all of the forces rather than letting every discipline go their own way. That's the difference from the m/e/p or HVAC approach that takes the building as it is—this is my load, what is the equipment you need to cover that, and so on. You need to first ask what creates that load and how you can influence it to decrease; only then can you think about the mechanical equipment that effectively covers it.





Deutsche Post Tower in Bonn, Germany (top and above right), and a model of Steven Holl's Beijing Looped Hybrid (above left).

Matthias Schuler, principal, Transsolar, Stuttgart, Germany.

AR: *How well do architects respond to your process?*

MS: We have to translate our ideas into a language that architects can understand and accept. First, we have to listen to their architectural intentions, then we can add our sustainable intentions to push them in a direction where the building not only looks cool, but it acts cool in terms of thermal design. It's always a compromise.

AR: *What is your definition of sustainability?*

MS: It's an overused term, to a certain extent. If we are living sustainably, then we have to consider our ecological footprint. What are the consequences of being here, living here, in respect to resources, impact on climate, impact on waste. We are in our own discipline only covering a part of it. Compared to a basic society like that of the Native Americans, our modern society has left the sustainable circle, and we need to find a new one.

AR: *Where do we start? Have we already lost?*

MS: We have to be creative enough. We have the mind to find solutions out of it. Some of it may lead us to step back from what we already consider our needs. Mobility is a key thing in this respect, such as spending all of these resources on traveling all over the world. Maybe we need to learn to live our lives and do our jobs in smaller circles.

AR: *What in the past five years has changed your mind about sustainability?*

MS: The statistics on hurricanes in the last year around New Orleans—we are doing a student center at Tulane University—made us aware. We were down there four weeks before Katrina and we talked to the local people about how New Orleans is the most endangered city in America in terms of global warming, and then the storm hit. It made it clear the system is in a sensitive balance, and we need to be careful not to bring it so far out to the point the system can't return.

AR: *With global warming, do you think humans need to just adapt to the idea of environmental extremes? How much can we control our environment?*

MS: For example, take Tokyo. In the past 10 years, the city temperature has risen around 18 degrees Fahrenheit in summer because of the heat-island effect. The city just finished three or four residential towers on Tokyo Bay that basically cut off natural ventilation to the city. In New York, buildings are heated to 80 degrees F in winter and cooled to 68 degrees F in summer. That is ridiculous. It should be heated to 68 in the winter and cooled to 80 in the summer. The human body can easily adapt to change. We have to understand that the same temperature indoors is not always good for the human body. Our buildings need to be able to adapt to changing bodily conditions. By sealing buildings (artificially conditioning them without operable windows), architects forgot how to shape them. That is a tradition that has been lost.

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Green markets and policies

Rick Fedrizzi discusses the role of the U.S. Green Building Council in helping change design culture.

Rick Fedrizzi, president, C.E.O., and founding chairman of the U.S. Green Building Council.

ARCHITECTURAL RECORD: *In light of the expanding corporate and manufacturer membership of the USGBC, how do you grow without losing touch with core beliefs?*

RICK FEDRIZZI: We're finding that architects, engineers, and contractors were the early adopters, but now we're not only finding manufacturers, we're also finding financial institutions, accountants, C.F.O.s, people with insurance backgrounds, health-care practitioners, educators—and you're scratching your head asking, why? They are all looking at their business and how to protect their interests. Becoming accredited doesn't give them the ability to build a LEED building. It does give them enough information to ask the right questions and to make intelligent decisions.

AR: *The USGBC doesn't currently lobby governments to adopt the LEED program. Will that ever change?*

RF: We have almost 70 chapters in the United States. The idea that chapters would become the front door to the USGBC is important. The chapters live, work, design, and construct in those cities and states and have a much more focused view of what they can accomplish from a local advocacy standpoint. When a particular city says all new buildings in the city have to be LEED Gold, we don't like that. We don't like the idea of special tax credits for green buildings. If you remember the solar tax credits in the 1970s, the minute those dried up, so did people's interest in solar.

AR: *Do you think we have reached a new peak of public consciousness in terms of environmental issues?*

RF: The political climate, the physical climate that gives us horrific weather patterns, an increase in science reporting information we didn't have before—such as photography from space showing in a 10-year period the reduction of the polar ice caps—and probably every one of us knows three to five people who had or have cancer. People who are aware have started to understand there is something we have to do.

AR: *Can government drive this?*

IP: It's got to stop being a Democratic or Republican issue, it's just a human issue.

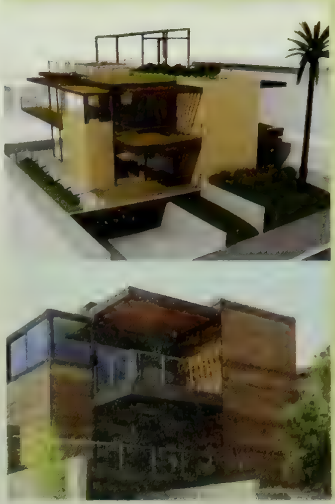
The green prototype house

Steve Glenn, of LivingHomes, has developed in Santa Monica, California, a prototype modular house based on a design by well-known Los Angeles architect Ray Kappe, FAIA. The house is designed to achieve a LEED Platinum rating under the USGBC's pilot LEED for Residential program.

Steve Glenn, C.E.O. of LivingHomes.

ARCHITECTURAL RECORD: *Prototype houses litter the Modern movement, particularly in Los Angeles. Why haven't they seemed to work?*

STEVE GLENN: I don't know many who were thinking of an environmental agenda, but there was less interest in Modernism in the public domain. Also, I think these architects approached it as an architectural problem, and not a production or product problem. What's changed is we have much greater interest in Modern design in a more affordable price-point. Modern design has transformed most major consumer product categories.



LivingHomes prototype model (above left), and the house as built (left).

AR: *You haven't built homes before—what made you want to start now?*

SG: When I started looking into the opportunities, I quickly concluded there were a lot of people like me who cared a lot about design and the environment, but who currently don't have the time or money or stress tolerance to do custom houses. I value things that have great form and functionality and are built in a way that is healthy and minimizes the ecological footprint.

AR: *Commodification drives the mass-housing market in that people constantly trade up or down depending on their needs. How do you address that market?*

SG: We want to try to offer a growth plan for the house to accommodate people's changing needs. That's why we have movable walls and a structural system that lets you add space both internally and externally, as well as modular millwork you can replace and change. From a price standpoint, our current line is about $250 a square foot, and we expect that to get as low as $150 a square foot in time.

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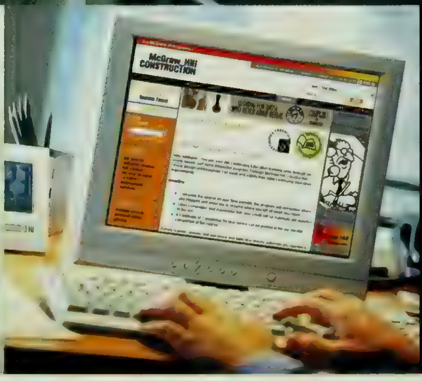

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It's easy being green

Sustainability's reach now extends well beyond buildings

By Russell Fortmeyer

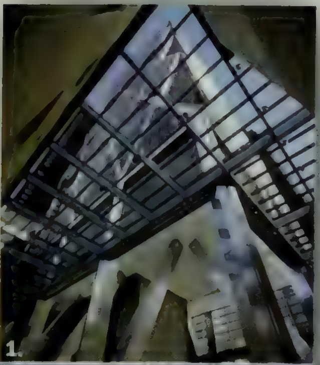
The July 17, 2006, cover of *Newsweek* shows a smiling family consisting of a father, mother, child, and dog arranged in a quaint living room. Everything in the photograph, except hair and flesh, pulsates in a shower of eye-popping shades of chartreuse. Against this hallucinatory image rests the headline "The New Greening of America."

Whether you like it or not, the impulse to insert the word "green" before every noun seems to have overtaken the American consciousness. As architects, we're in an ideal position to take advantage of this strike-while-it's-hot mentality.

Of course, architecture and sustainability are inseparable. We could trot out any number of great architects to make our point, but one will do. In 1910, Frank Lloyd Wright summed up his philosophy in a simple statement on "organic architecture," writing in his German-published *Collected Works* that "it is quite impossible to consider the building as one thing, its furnishings as another, and its setting and environment still another."

In the pages that follow, you'll find this philosophy reiterated in various ways. Today, instead of Wright's organic architecture, we call it "integrated design." You see it in the way Sauerbruch Hutton Architects uses trapped methane gas from a landfill to provide an energy source for heating the Dessau Federal Environmental Agency building or how Ken Yeang's Singapore National Library uses natural ventilation to cool an atrium. We've followed Norman Foster's Hearst Building from its initial design [RECORD INNOVATION, November 2005, page 20] to its realization today, and we bring you that other great British architect, Richard Rogers, and his new Welsh Assembly. All are leading lights in the realm of sustainability.

If *The New York Times* calls green "the new black," as they did in their May 17, 2006, special section, we're inclined to agree.



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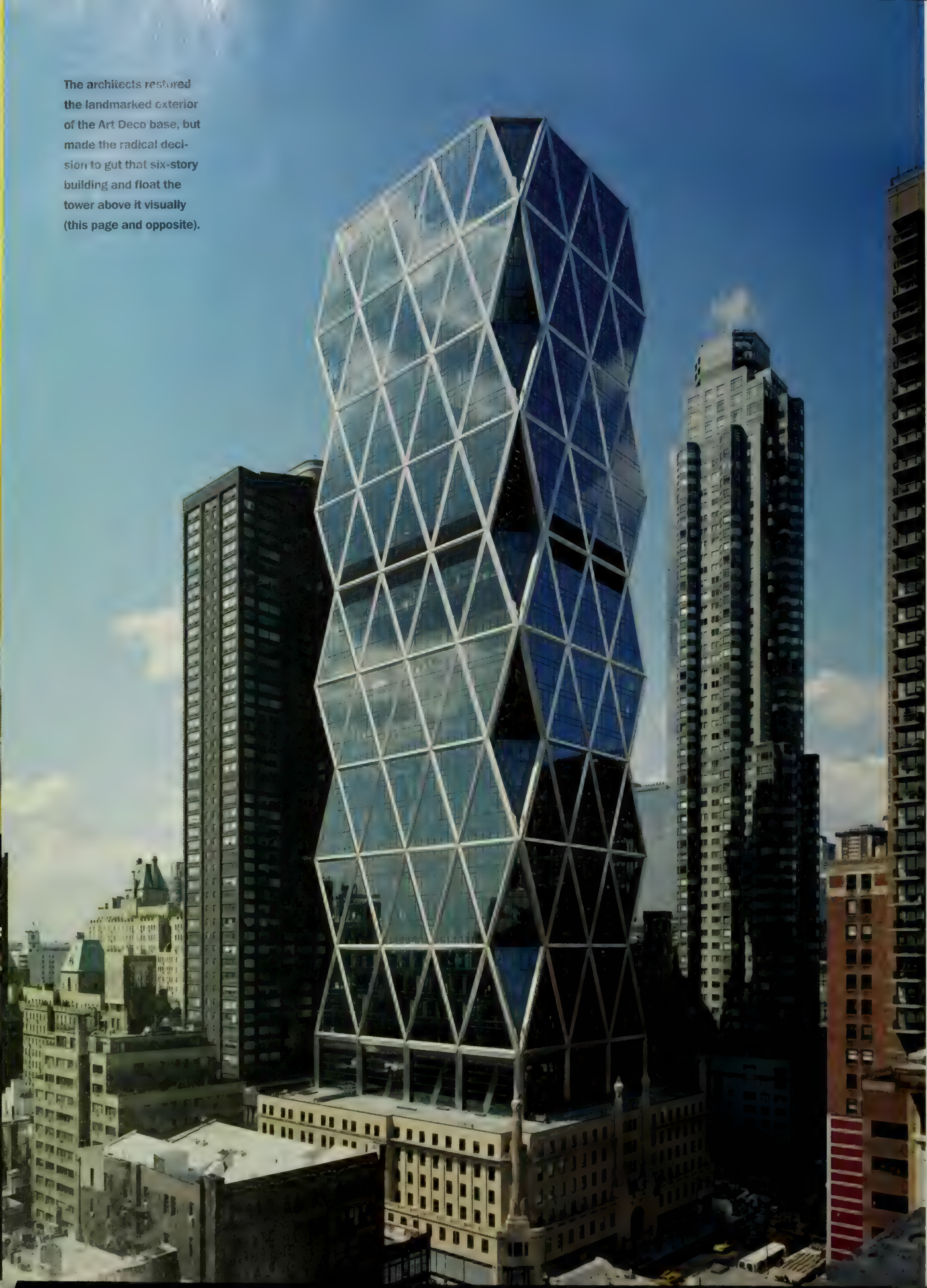
1. Hearst Tower
Foster and Partners
2. Federal Environmental Agency
Sauerbruch Hutton Architects
3. The National Library
T.R. Hamzah & Yeang
4. National Assembly for Wales
Richard Rogers Partnership

PHOTOGRAPHY: © CHUCK CHOI (1); ANNETTE KISLING (2); TIM GRIFFITH (3); RICHARD BRYANT/ARCAID (4)



The architects restored the landmarked exterior of the Art Deco base, but made the radical decision to gut that six-story building and float the tower above it visually (this page and opposite).

For its Manhattan debut, **Foster** and Partners creates the new **HEARST TOWER** with a glass-and-steel shaft hovering atop a vintage low-rise

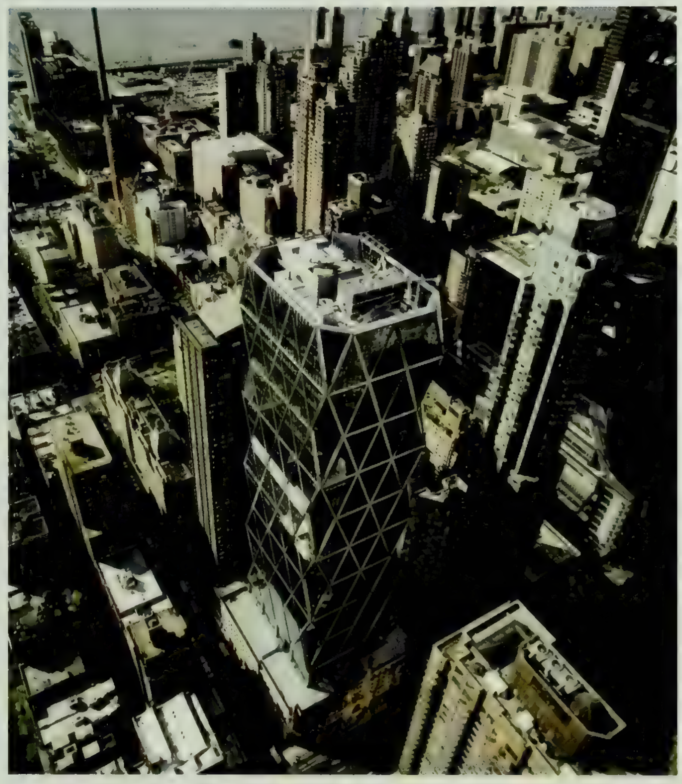
y Sarah Amelar

New York City's Hearst building is a bit of a jack-in-the-box without the Jack. Springing from an ornate 1920s base, the structure's stainless-steel-clad diagrid rises like a great scissor lift, but then, defying expectation, the shaft stops short, without a culminating rm topping its 46 stories. A faceted glass-and-steel tower erupting from a x-story, cast-limestone base—adorned with grandiose allegorical sculpres and monumental urn-crowned columns—the building simultaneously :fies, realizes, and (surely in its sustainable character) exceeds the aspiraons behind the creation of its lowest floors 78 years ago.

In 1928, when those first six stories went up, media magnate 'illiam Randolph Hearst envisioned them as the base for a future tower and e beginning of a real estate empire he imagined dominating Columbus rcle, just to the north. Though the Great Depression thwarted this grand heme, architect Joseph Urban's six-story, 40,000-square-foot building rved as the Hearst Corporation's magazine headquarters for the next ven-and-half decades. Extending from 56th to 57th Streets along Eighth enue, the topless U-shaped base, theatrically eclectic in its Art Deco style, mained an oddly truncated monument in a city of skyscrapers.

By 2001, when the corporation commissioned Foster and Partners realize a tower here, the original exterior was already landmark-protected, d there to stay. Since completion of the base, naturally, some of the comny's ambitions had shifted, while others remained virtually unchanged. A ime goal was still to bring Hearst's New York–based magazines under a igle roof, but the 12 titles of 1928 had grown to 16, including such famil- glossies as *Esquire* and *Cosmopolitan*. While providing a 20,000-squareot floor for each magazine (with a few larger or smaller exceptions), the w building would need to house test kitchens, a lab, a fitness center, and a ll TV station, bringing the gross total area to 856,000 square feet.

And over the course of the project, the client would become interted in minimizing as well as maximizing its building's impact on the y—creating an iconic yet environmentally responsive tower or, as touted Hearst's Web site, "not just a better skyline, but a better sky." Though the rporation had no particular history of architectural sustainability, Foster d Partners did, with applied research and a roster of techno-green projts, including Europe's tallest building, Commerce Bank, in Frankfurt. Even Hearst's leaders had no initial green agenda, says Foster senior partner andon Haw, they readily embraced the possibilities—seizing the opportuty to raise the bar for environmental responsibility in a high-profile way, uch as their competitor, Condé Nast, had attempted with its headquarters



building by Fox & Fowle, 14 blocks away [RECORD, March 2000, page 90].

The choice of Norman Foster, a world-class architect who had yet to debut in New York City, seems hardly a fluke, especially given the practice's experience in adding onto prominent, if quasi-derelict, historic structures or sites, including the Reichstag, in Berlin [RECORD, July 1999, page 103], and the British Museum court, in London [RECORD, March 2001, page 114]. But even with that résumé, the architects initially found the Urban building "a rather strange Deco piece and a tired-looking landmark," recalls Haw. "And we wondered what would be the way into this project."

The firm's radical "way in" ultimately involved gutting the base and restoring its exterior, while opening up the interior via removal of the existing floor plates. The architects argued that the original floor-to-ceiling height of 11.5 feet would be inadequate by today's state-of-the-art office

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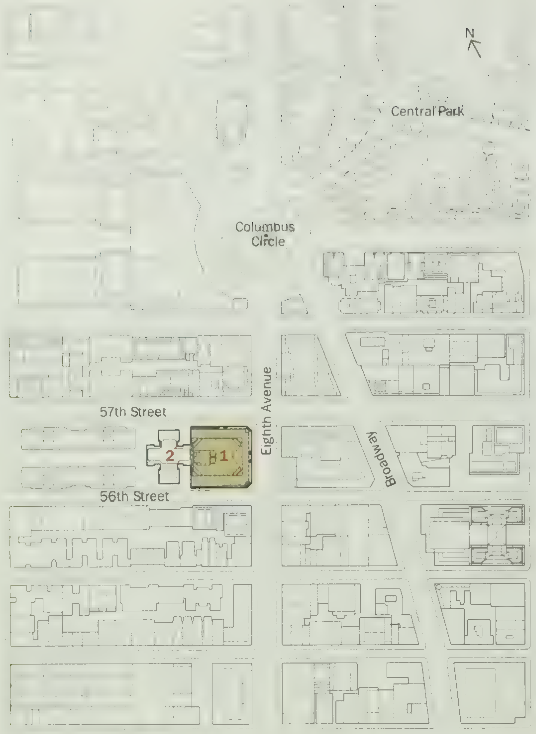
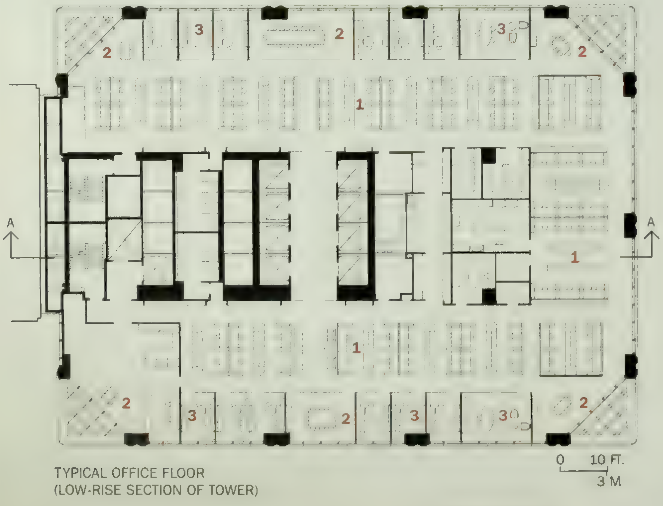
Project: *Hearst Tower, New York City*
Architect: *Foster and Partners—Norman Foster, Brandon Haw, Mike Jelliffe, Michael Wurzel, Peter Han, David Nelson, Gerard Evenden, Bob Atwal, John Ball, Nick Baker, Una Barac, Morgan Flemming, Michaela Koster, Chris Lepine, Martina Meluzzi, Julius Streifeneder, Gonzalo Surocca, Chris West, John Small, Ingrid Soken*
Associate architect: *Adamson Associates*



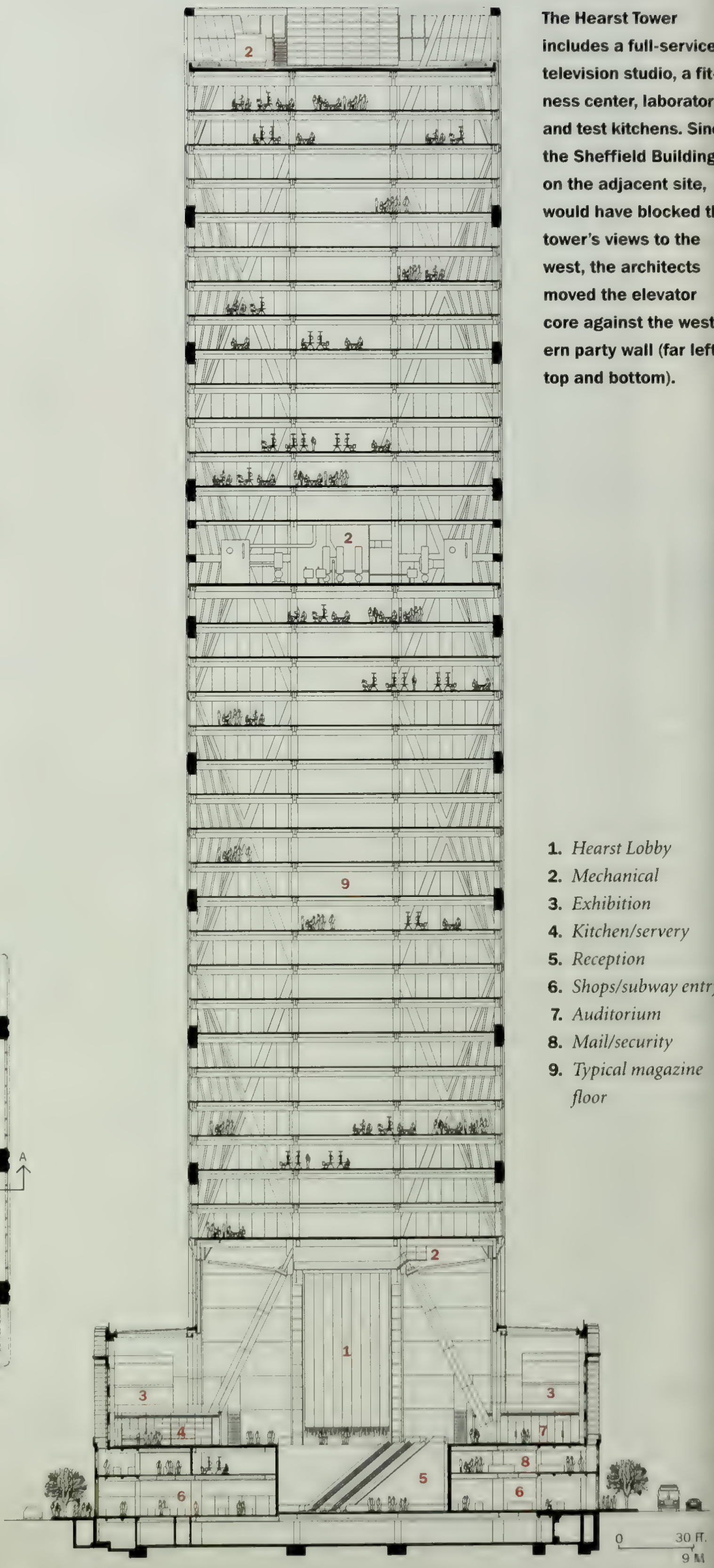
SITE PLAN

1. *Hearst Tower*
2. *Sheffield Building*



TYPICAL OFFICE FLOOR
(LOW-RISE SECTION OF TOWER)

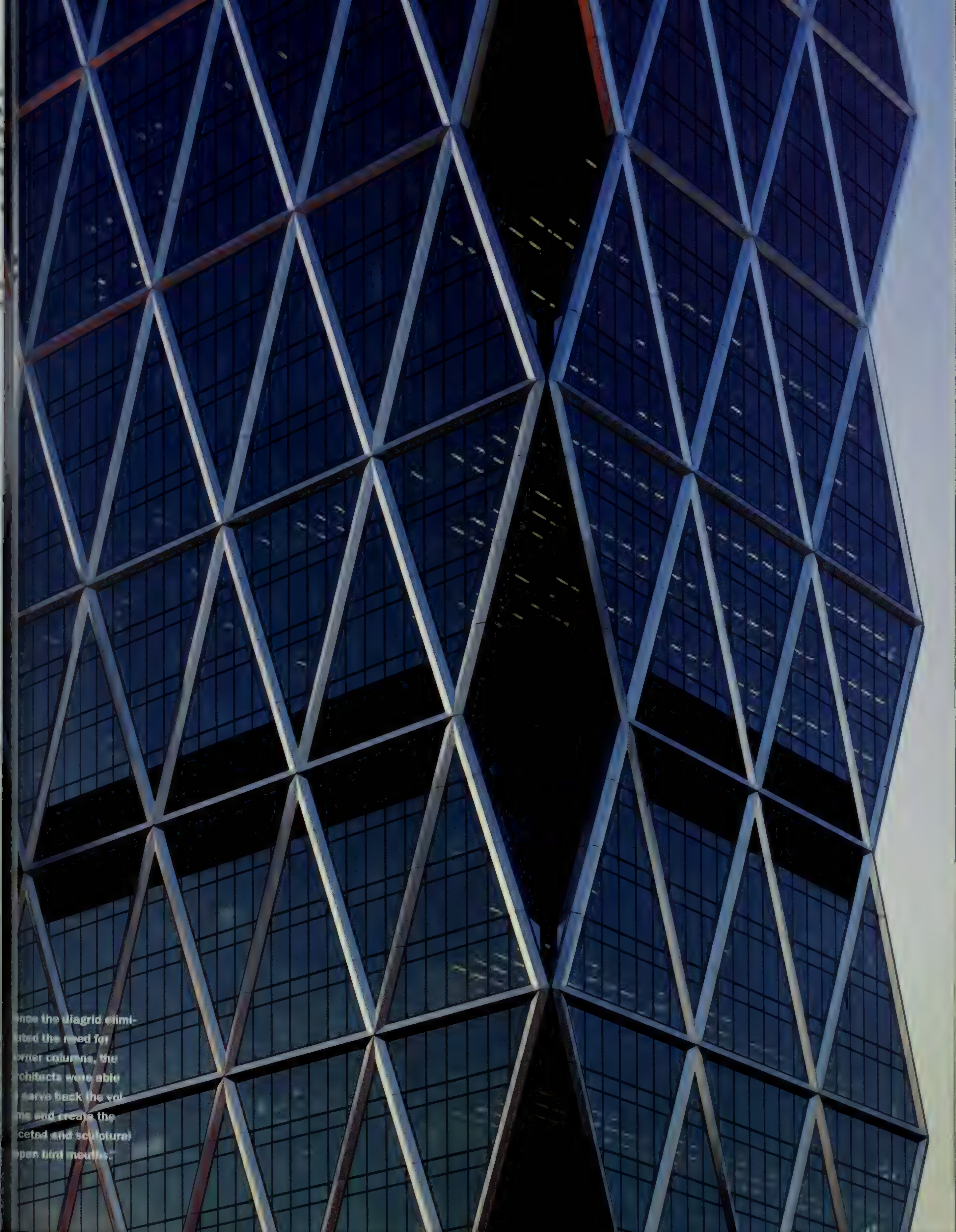
1. *Open cubicles*
2. *Meeting/conference*
3. *Office*



The Hearst Tower includes a full-service television studio, a fitness center, laboratory, and test kitchens. Since the Sheffield Building, on the adjacent site, would have blocked the tower's views to the west, the architects moved the elevator core against the western party wall (far left, top and bottom).

1. *Hearst Lobby*
2. *Mechanical*
3. *Exhibition*
4. *Kitchen/servery*
5. *Reception*
6. *Shops/subway entry*
7. *Auditorium*
8. *Mail/security*
9. *Typical magazine floor*

SECTION A-A



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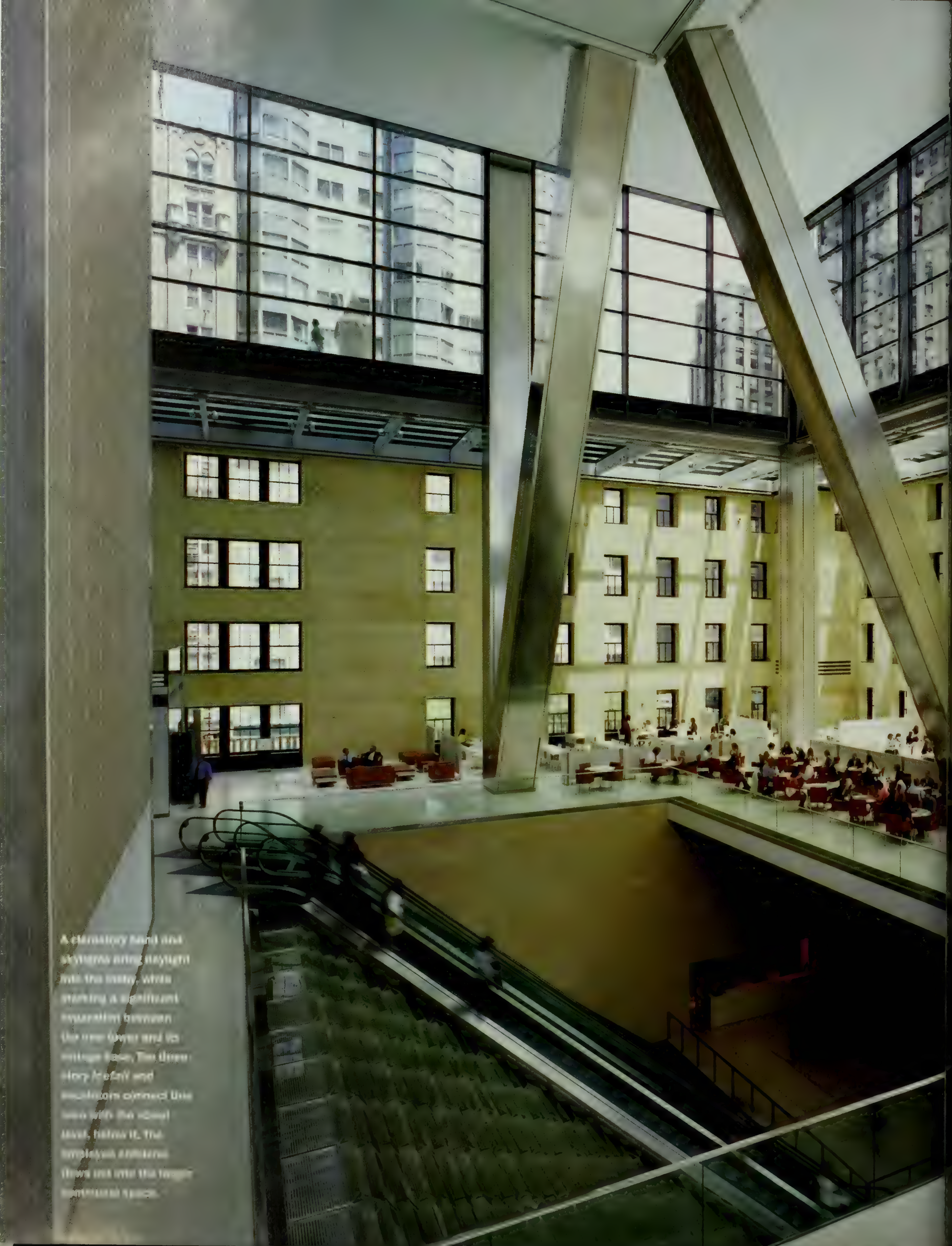
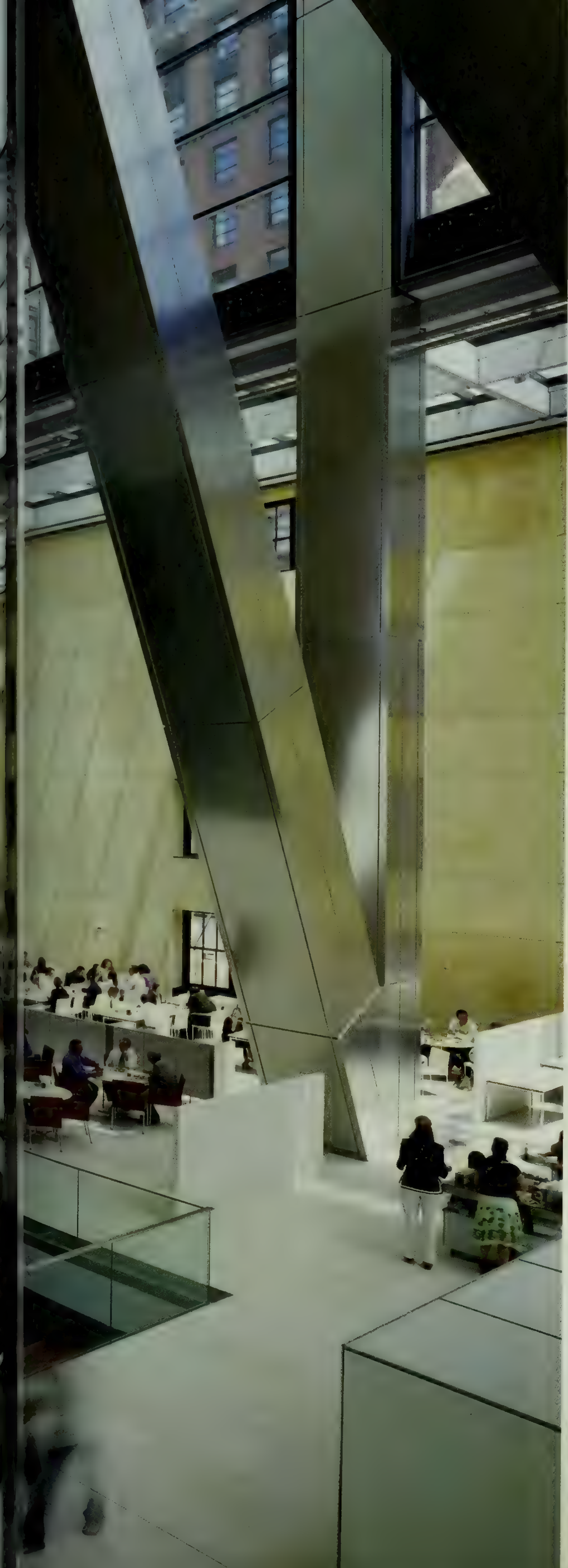


A clerestory band and skylights bring daylight into the lobby, while marking a significant separation between the new tower and its vintage base. The three-story 'café' and escalators connect this area with the lower level below it. The employee entrance flows out into the larger communal space.



standards—and a more straightforward rehab would relegate "celebratory" communal spaces to the tower, rather than connect them with the street. The team envisioned turning the hollowed-out volume into an interior "town square," with the tower "hovering" above it. "Certainly not the conventional solution," confesses Lord Foster. "Everyone said, 'You can't do this in New York—you'll be accused of Facadism'" (though in the end, the Landmarks Commission gave its blessing).

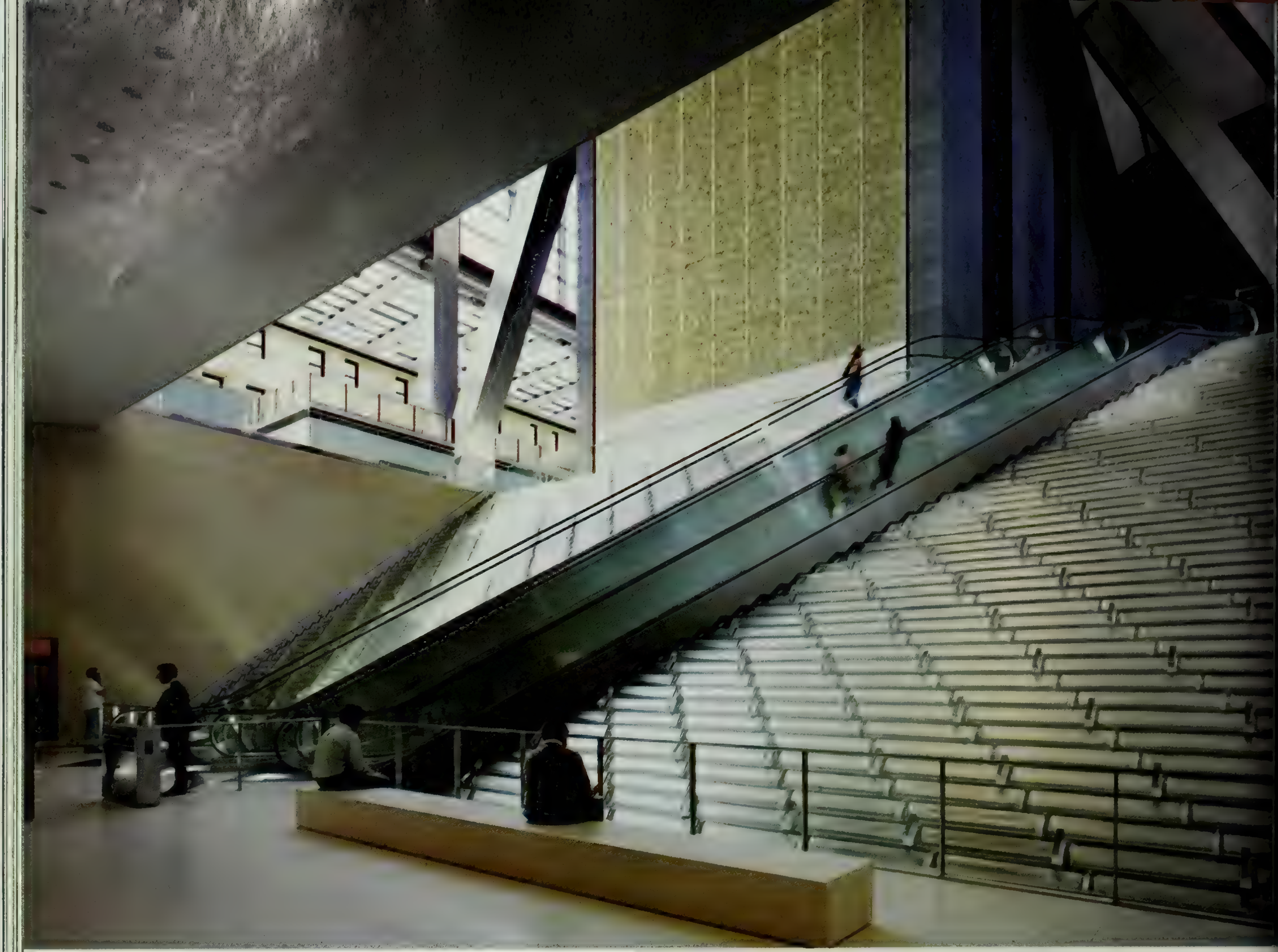
To realize this scheme, the architects reinforced the existing shell structurally (a necessity in the absence of the original floor plates), furred it out, and lined it with exterior stucco—an inside-out inversion akin to the outdoor walls the firm had transformed into indoor ones at the British Museum. At the Hearst building, Foster and Partners retained street-level retail space and subway entrances, raising the grand lobby (along with a new 492-seat cafeteria and 167-seat auditorium) three stories above grade, accessible by escalator. But even as the communal space fills with daylight and its modified walls show their heft, the town-square conceit remains semiconvincing, with the shell never quite shedding its stage-set quality.

Inside the lobby, the tower appears overhead through flat perimeter skylights—an apparition described by some as "floating" or stunningly soaring, and by others as outright jolting. Certainly the bold juxtaposition of the ornate base and prismatic tower is consistent with the practice's earlier work, which distinguishes between old and new, favoring the contrasting play of materials, forms, and structural systems over pastiche or stylistic blending. This design, says Haw, "really evolved from a series of pragmatic considerations," including a desire to set the tower back from its historic base, optimize the new structure's view corridors, and fit into the skyline.

Because the Sheffield Building, on the adjacent site, blocks westward views, the architects moved the elevator core against the western party wall. While this shift from a conventionally centered core increased the unobstructed floor area, it could have left the eastern facade unstable and vulnerable to lateral wind forces. The structural solution, the architects determined, would require either a "robust" (i.e., hefty) moment frame or a visually and physically lighter diagrid, which, by their calculations, could (a) reduce the total amount of steel by 20 percent, (b) increase structural rigidity while reducing weight, (c) allow for 40-foot spans, maximizing column-free space, and (d) permit the elimination of corner supports. They chose the diagrid and later finessed its triangulated, faceted 3D form, trimming away volume at corners to create sculpturally distinctive "bird mouths." The exoskeleton, reminiscent of a harlequin supergraphic, is deceptively scaled, with its triangles each rising four stories.

"Triangulation permeates the natural world," says Foster, adding, "It's an elegant system that brings visual lightness to what could have been a dumpy tower—after all, 46 stories is low by New York standards." While the crystal geometry successfully shifts and shimmers with changing vantage points, the structure appears, in places, more muscular than light—as in the lobby, where huge stainless-steel-clad columns and diagonal members forcefully penetrate the space, carrying down the diagrid's loads.

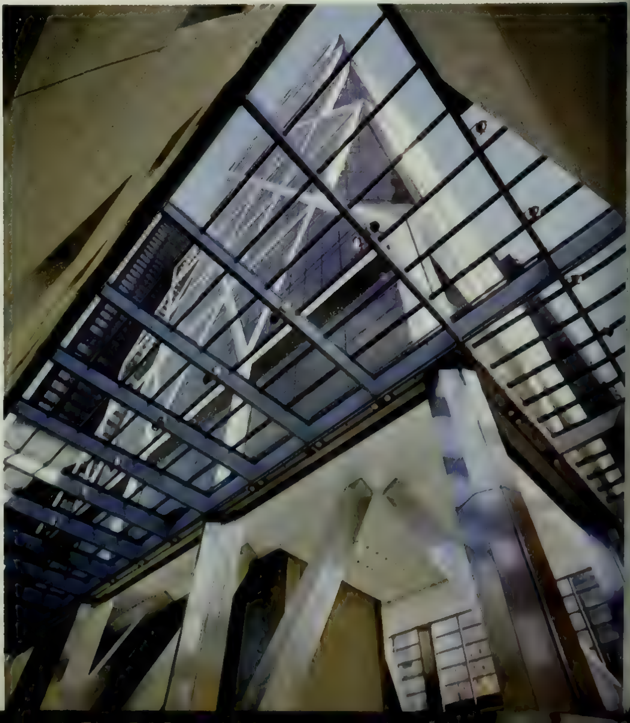
The language of triangles (largely pragmatic, rather than decorative) permeates the interior of both the base and tower. Just inside the building's front door, a trio of three-story escalators connects the street level and grand lobby, or *piano nobile*, as Foster calls it. The escalators cut diagonally (in both plan and section) through the *Icefall*, a water feature that flows over a lit and canted cast-glass wall, a collaborative work by the architects with artist James Carpenter. Fed by recycled rainwater, the fall plays a significant role in cooling the vast lobby in summer (using chilled water) and humidifying it in winter. Rain, harvested in a 4,000-gallon reclamation tank in the basement, not only feeds the fountain, but also replaces moisture lost to evaporation in the office air-conditioning and irrigates plantings outside



WHAT MAKES THIS BUILDING GREEN?

- A waterfall that uses recycled rainwater, harvested in a 14,000-gallon tank, to cool or humidify the lobby, as needed.
- Recycled materials, including more than 85 percent of the steel.
- Low-E-coated glass that lets in sunlight without heat-producing radiation.
- An interior fit-out featuring sustainable, low-toxicity materials and products, mostly sourced locally.
- Sensors to conserve electricity and water.

Escalators (above) connect the entry, at street level, with the lobby or indoor "town square." Skylights offer views from the town square to the tower, hovering above it. Structures supporting the stainless-steel-clad diagrid penetrate into the lobby (right).



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main entrance. Also, a radiant system of water-filled pipes under the by's limestone floor helps cool or heat the area, as needed, exploiting the ne's thermal mass and the water's efficiency in temperature conveyance.

The Hearst Tower, expected to receive a LEED Gold certification m the United States Green Building Council (USGBC), boasts a long list nvironmentally responsible features. For starters, recycling began at the nolition site. More than 85 percent of the tower's steel is recycled, and the grid saves an estimated 2,000 tons of steel. The climate-control system orporates "free air-cooling," using filtered outside air without tempera- e adjustment 75 percent of the year, according to project architect chael Wurzel. Other features include reflective roof pavers that increase rgy efficiency by reducing solar absorption, and low-E-coated glass that ers in daylight without heat-producing radiation. And such small meas- s as sensors throughout the building conserve both electricity and water.

Because the building (at a cost exceeding $500 million) is privately d and entirely owner occupied, the client and architect could guide many els of green decision making. Even the fit-out, from carpets to desktops, ures sustainably harvested finishes, low in toxicity, with the majority of terials and products sourced locally. And although 7 World Trade Center t Hearst in receiving the city's first Gold LEED rating, that tower—a spec- tive project intended for rental tenants and certified under the USGBC's ot core-and-shell program—is far less comprehensively green.

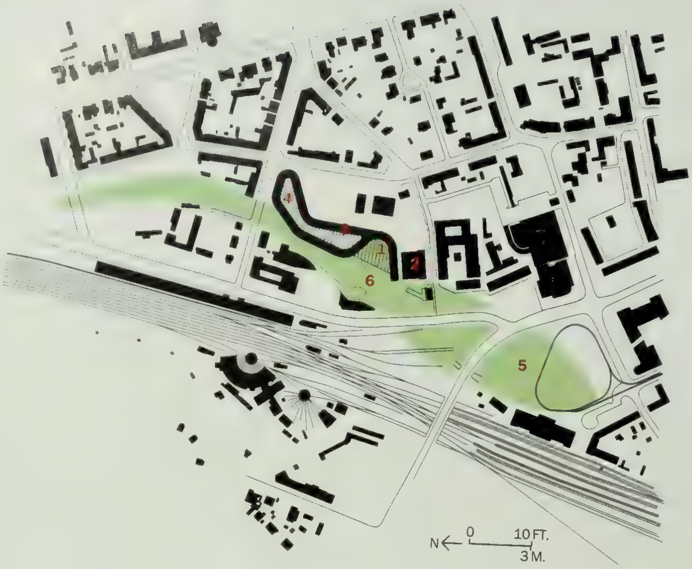
From an aesthetic standpoint, the Hearst Tower's private ownership and occupancy permitted the architect to take risks with spatial allocation and formal invention—creating the soaring lobby and corner "bird mouths"—that a client poised to collect rent on every square inch would have nixed. Hearst employees, now gradually moving in, are already flocking to the cafeteria and fitness center (on the 14th floor), mingling in the indoor "piazza," and basking in the luxury—so rare in Manhattan office towers—of light, air, and space. Though the idea of a fountain in a grand lobby springs from the very cliché of corporate prowess, the architects have given it new life and green purpose. And surely, in their investigation of the building skin, they have developed an unprecedented perimeter structure.

A controversial building, the Hearst Tower has its admirers, who look for it eagerly on the skyline, and, undeniably, its detractors—including a critic who describes it as "arbitrarily sliced off" and "meeting the sky abruptly" or the lady on the street who likens it to a "crystal vase on a doily."

But controversy is not necessarily a bad thing. "I know the tower doesn't have a conventional flourish on top," says Lord Foster, "but the building's not conventional in many ways—and for that I make no apology." ■

Sources

Curtain wall: *Permasteelisa*
Office furniture: *Steelcase*
Demountable partitions: *Lema*
Upholstery: *Vitra; Walter Knoll*



1. *Public lobby*
2. *Library*
3. *Offices*
4. *Atrium*
5. *Green space*
6. *Park*

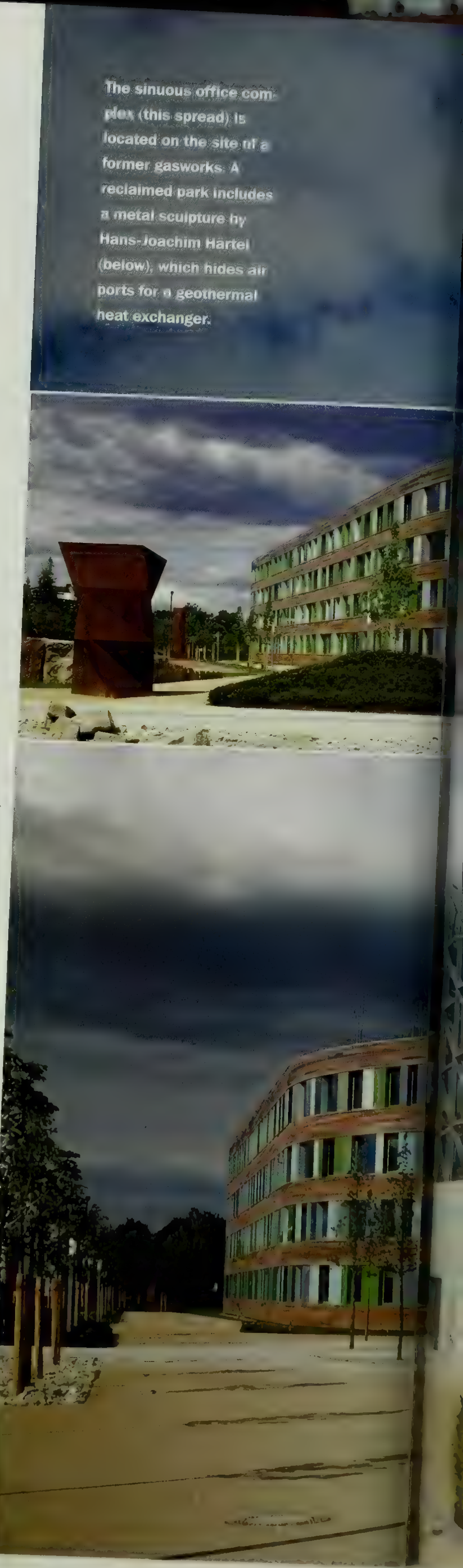
By Suzanne Stephens

One of the most "iconic" buildings erected in Europe in the past few years does not arrest your attention as a monumental architectural and engineering extravaganza. While its sinuous, polychromatic features unfold intriguingly before you, its entire gestalt can be taken in only by viewing it from the air. The symbolic impact of the Federal Environmental Agency (Umweltbundesamt/UBA) building, in Dessau, Germany, owes more to its achievement in energy-conscious measures than as a quickly grasped image. Designed by the Berlin-based Sauerbruch Hutton Architects, a firm known for its sustainable buildings rendered with unusual verve, such as the GSW Headquarters in Berlin [RECORD, June, 2000, page 156], the amoeboid concrete structure, clad in colored glass panels and wood, represents an imaginative combination of energy-saving design and technology.

Ironically, the Federal Environmental Agency decided to build its new home in Dessau, where Walter Gropius designed the legendary Bauhaus in 1925–26, after he had moved the school from its original

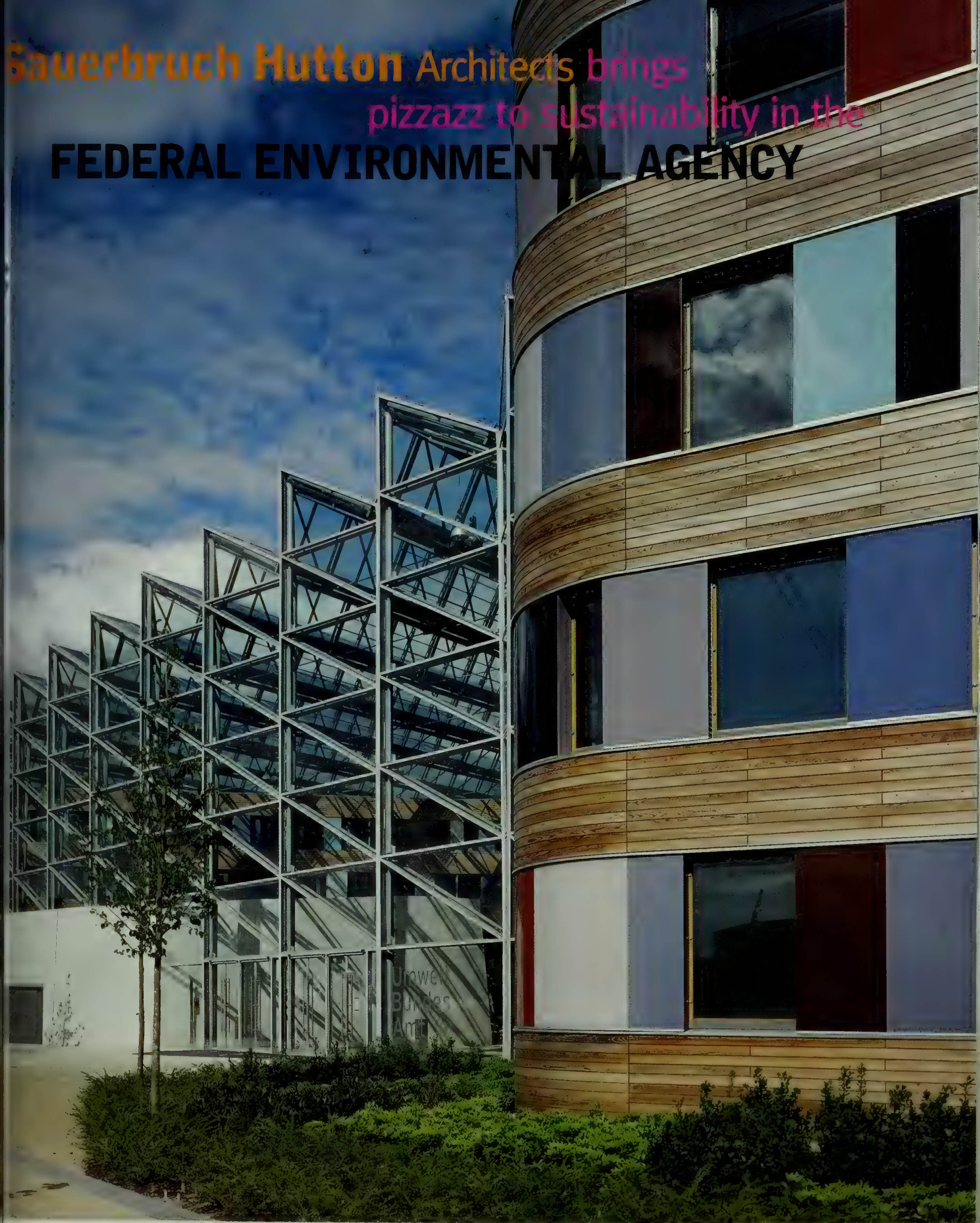
Project: *Federal Environmental Agency, Dessau, Germany*
Architect: *Sauerbruch Hutton Architects—Matthias Sauerbruch, Louisa Hutton, Juan Lucas Young, Jens Ludloff, principals in charge; Andrew Kiel, René Lotz, project architects*
Engineers: *Zibell Willner & Partner (energy concept and environmental engineering); Krebs & Kiefer, (structural); ITAD (plumbing); KEMPA (civil); G.U.T. (environmental remediation)*
Landscape architect: *ST raum a*
Consultants: *GFÖB (ecological); IEMB (energy); Mueller-BBM (building physics); Schallschutzbuero Diete (acoustics)*

PHOTOGRAPHY: © ANNETTE KISLING, EXCEPT AS NOTED; PAUL RAFTERY/VIEW (THIS SPREAD AND INSET)



The sinuous office complex (this spread) is located on the site of a former gasworks. A reclaimed park includes a metal sculpture by Hans-Joachim Hartel (below), which hides air ports for a geothermal heat exchanger.

Sauerbruch Hutton Architects brings pizzazz to sustainability in the FEDERAL ENVIRONMENTAL AGENCY



WHAT MAKES THIS BUILDING GREEN?

- Twenty percent of the energy comes from renewable sources.
- A compact form and high levels of thermal insulation minimize heat loss.
- A geothermal heat exhanger precools air in the summer and preheats air in the winter.
- Thermal solar collectors and photovoltaic cells make use of solar energy.
- Natural ventilation and convection replace air-conditioning.

The old Wörlitzer Bahnhof station (above) is being recycled for an information center for the environmental complex. The café is detached from the main building (far left in photo above) and overlooks a pond.

home in Weimar. Although the Bauhaus served excellently as a International Style icon of functional design and technology in its day, i was hardly energy-conscious: All you had to do was look at its prominen glass facade facing west to get the picture. But that was then. Now Modernism increasingly embraces sustainability.

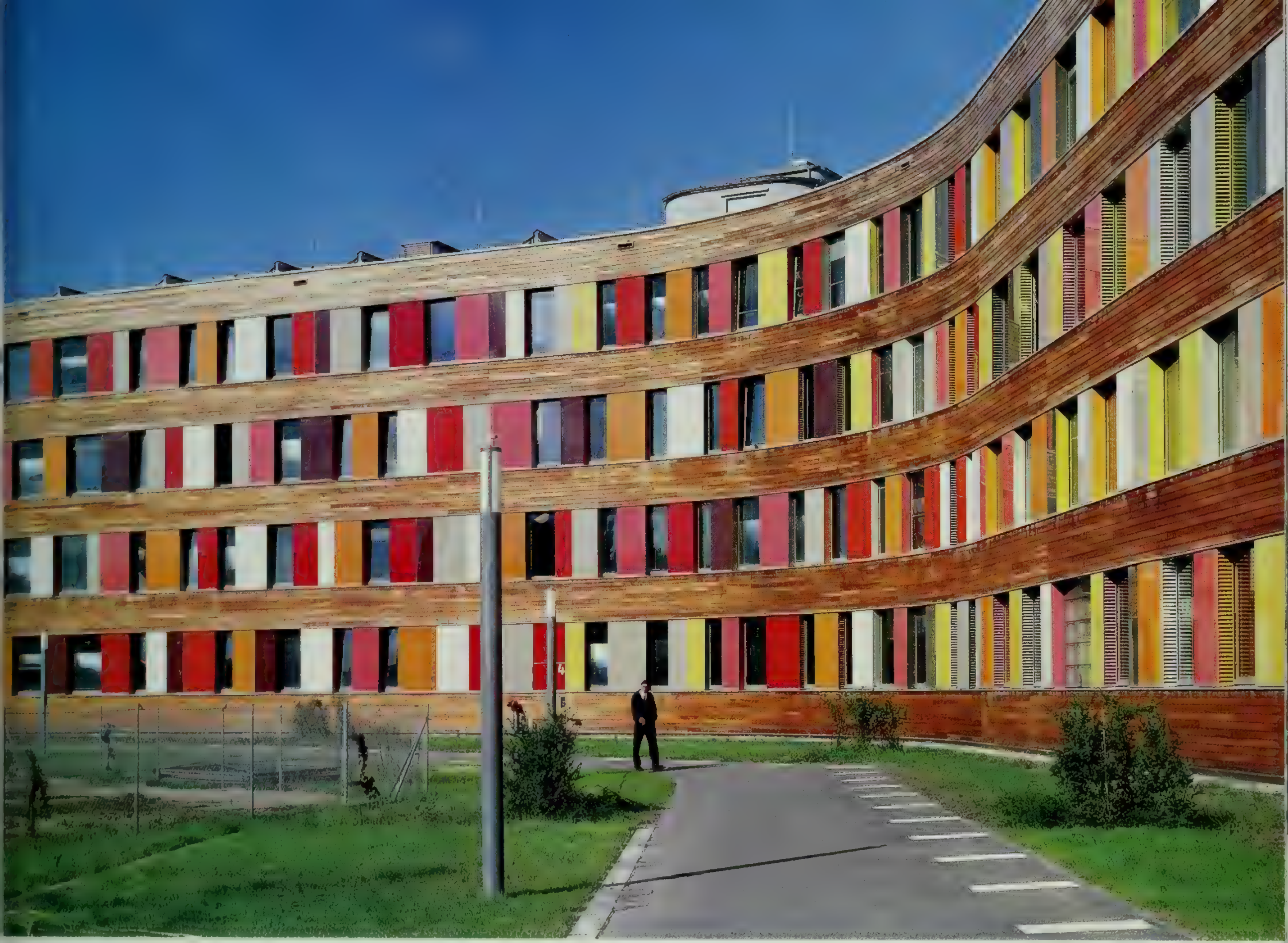
In planning the new 400,000 square-foot headquarters for 80 employees, the agency decided this would not only be a demonstratio project for energy-conscious practices, but also a learning center. Hence it includes a library—the largest public one in Europe devoted to energy conscious topics—plus an auditorium, exhibition area, informatio center, and café. The agency called for 20 percent of the energy to com from renewable sources, and required that heating consumption be 4 percent less than Germany's energy standards currently in effect.

Although the agency had been based in Berlin, the governmen wanted to help revitalize Dessau, a former industrial center, which is no afflicted with a 40 percent unemployment rate. Nevertheless, many of th agency employees still commute an hour and 20 minutes from Berlin Fortunately, rail commuters need only walk a few minutes to the site, for merly the location of a gasworks factory. The bad news was that th gasworks had contaminated the soil and groundwater, leaving a nast mess that required replacement of 30,000 cubic feet of earth.

Traces of the industrial past remain: A former factory buildin (Building 109) and the mansard-roofed old Wörlitzer Bahnhof, once station for a rail line, as well as unused tracks along the west, give the 7 acre site a picturesquely gritty aspect. However, to the north lies gree open space now connected to a linear park within the complex where th tracks are being landscaped. To the east stretches a tidy cluster of 19th century houses, and to the south, a mix of 20th-century apartment block and commercial buildings.

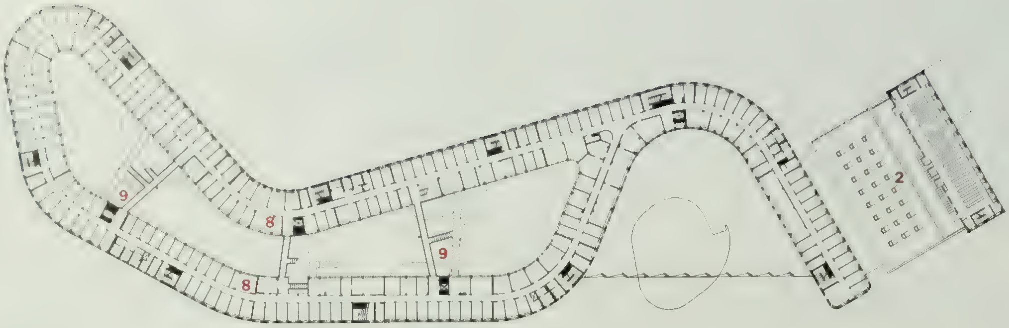
In keeping with the program, the architects are recycling th Wörlitzer station for an information center, while the old factory building notable for its Belgian bond-brick walls, has already been renovated an expanded for the library. To link the old building to the complex, the archi tects created an extension with an ascending giraffe-neck form that allow natural ventilation to flow into the library.

For the main office building, Sauerbruch Hutton created a ser pentine plan enclosing a glass-topped atrium. Not only would th four-story building be more compact in terms of reducing exterior wa

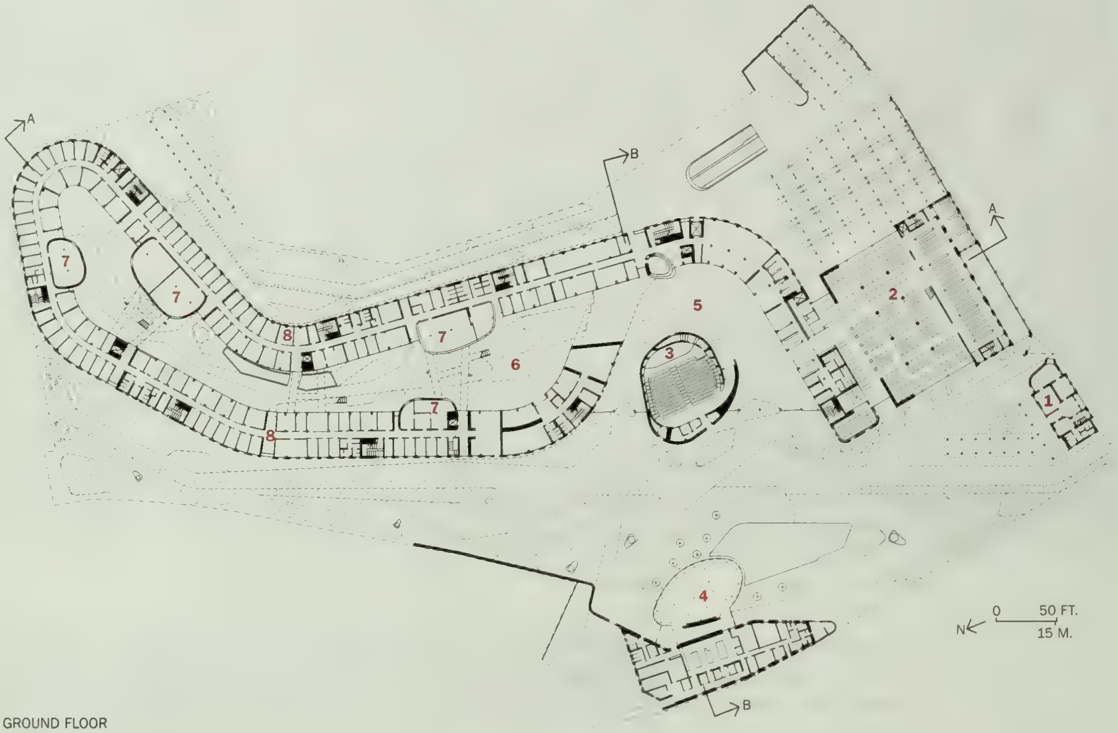


The main building's spandrel panels, sheathed in Bavarian larch, alternate with bands of clear and colored glass. Thirty-three colors refer to the surrounding context: Panels nearest the park on the north (right) are green, while the panels nearest the old brick factory and its new library wing (left and right) are dark red, lavender, and purple. The eastern facade, facing a 19th-century residential neighborhood (above), features ochre, orange, and red hues.

Daylight is admitted to the landscaped atrium through the serrated-glass roof (right). The offices in the double-loaded looping plan receive daylight and air through use of operable windows. All employees have their own offices with windows, and ones overlooking the atrium seem to be favored.

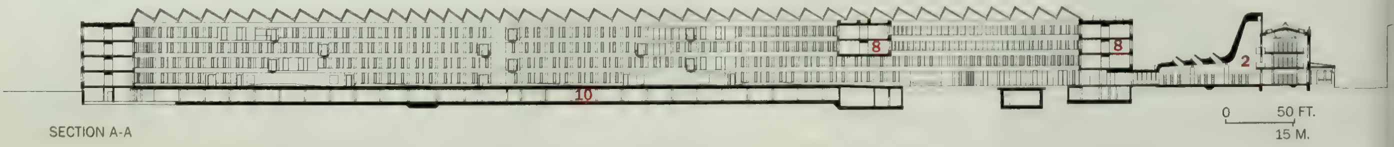


SECOND FLOOR

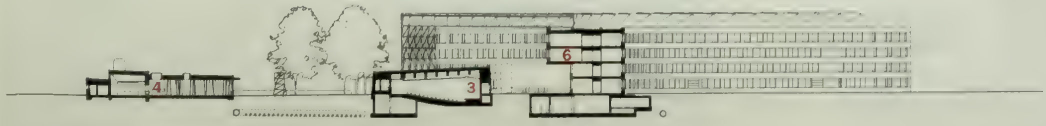


GROUND FLOOR

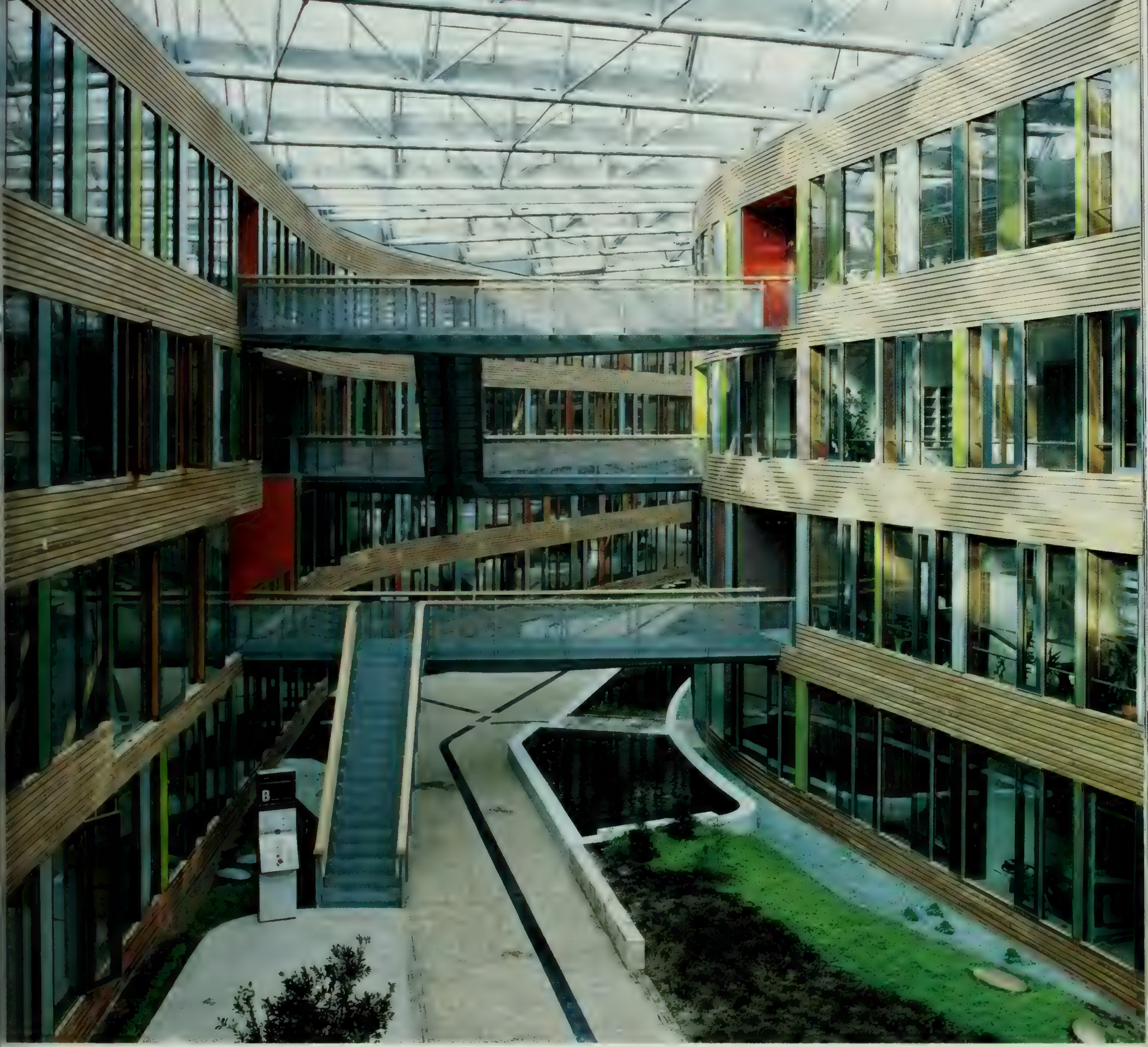
1. *Wörlitzer Bahnhof*
2. *Library*
3. *Auditorium*
4. *Cafeteria*
5. *Forum (public lobby)*
6. *Atrium*
7. *Meeting spaces*
8. *Offices*
9. *Bridges*
10. *Parking*



SECTION A-A



SECTION B-B



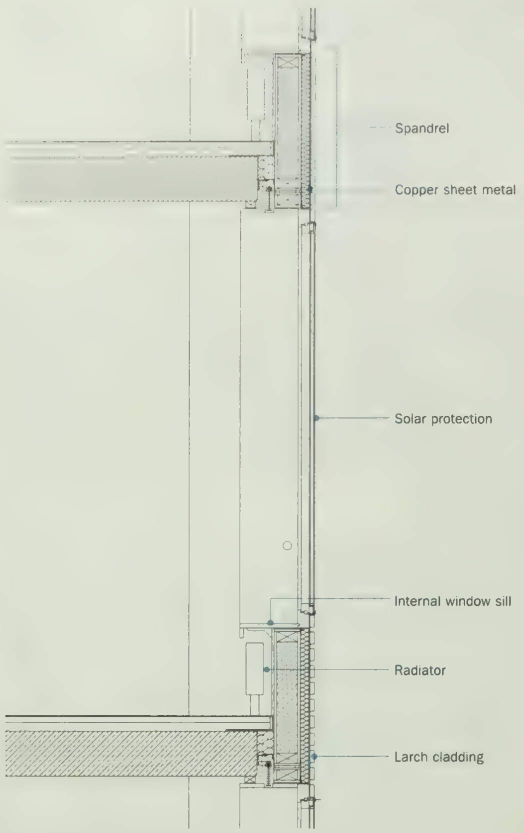
rface exposed to the harsher elements, but workers wouldn't be drawn own seemingly mile-long, straight corridors.

The ends of the 1200-foot-long loop don't meet; a large serrated azed wall acts as the entrance and flanks a discretely sculptural concrete rm containing the auditorium. (Several other such sculptural objects, ubbed "boulders," positioned around the atrium, provide conference aces.) Within the atrium, ST raum a, Berlin landscape architects, esigned a park of variegated plantings. It is in turn crossed by bridges at ree points to connect the looping strand of double-loaded offices.

In keeping with the back-to-nature look, Sauerbruch Hutton vered the exterior spandrels in Bavarian larch, now weathering to a light ay. Polychromatic glass panels, with the colors screen-printed on their cks, alternate with clear glass windows for the horizontal fenestration. e varied hues stemming from seven different families of colors alleviate y sense of monotony in the long, linear form; on top of that, contrasting colors on the reveals of flat steel or louvered panels heighten the facade's three-dimensional quality.

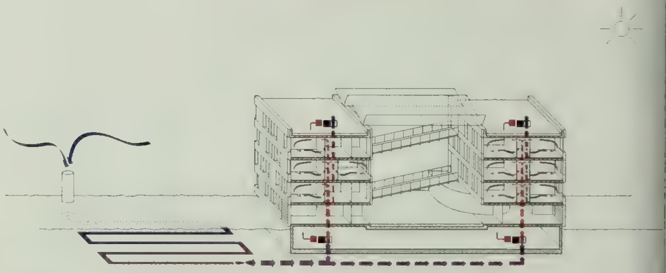
To keep the building within the $82 million budget, the architects relied on a poured-in-place concrete frame with a flat-slab construction generally supported by two rows of edge columns. Exposed concrete ceilings provide thermal mass to hold heat and cold at the appropriate times of the year.

The building's atrium remains about 22 degrees Fahrenheit warmer than the outdoors during the cold months, helping to minimize heat loss. In another move, Sauerbruch Hutton cut down on consumption of electricity and heat with cogeneration systems that reuse waste heat from the mechanical system. For the building's overall heating needs, the firm took advantage of methane gas from a local landfill. In addition, photovoltaic panels in the glazed shed roof over the entrance area can supply a percentage of the electrical load. On the roof of the main building,

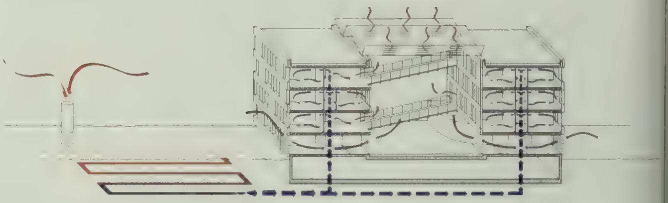


FACADE SECTION

Each of the 800 employees has his or her own office of 129 square feet (a fitting rebuke to the acoustically challenged open office). Triple glazing keeps heat from being lost in the winter, with operable windows used for natural ventilation.



Winter



Summer

In the summer, hot air is drawn over the subterranean geothermal heat exchanger to cool it; natural convection takes hot air out through the atrium. In the winter, cool air is preheated by this system.

vacuum-tube heat pipe collectors harness solar energy to help cool the building's mechanical system. The most significant energy-saving feature, explains principal Louisa Hutton, is the geothermal heat exchanger, which involves a subterranean system of pipes, 3 miles long, the largest air-based geothermal exchange system in the world. The heat exchanger allows preheating of air in the winter and precooling in the summer before it is circulated to the offices. The air is drawn from the outside, into the underground air passages by four air-handling units in the basement. It then moves through ducts in the foundation slabs to riser shafts, and finally into the ducts in offices' suspended ceilings. The agency jettisoned air-conditioning for natural ventilation, with operable windows, and natural convection. In the summer, convection ventilates air through the atrium, while cooler air is drawn in at night through wood panels that automatically open.

Owing to UBA's role as a demonstration project, intensive research informed the battery of environmental approaches to save energy consumption in the building, and ongoing analyses are being undertaken to monitor the efforts. In the year it has been open, the architects found that the energy strategies have not only met expectations, but the agency is using even less electrical energy than originally estimated. Now visitors to Dessau have yet another architecturally significant attraction to visit. Here in Dessau, the Federal Environmental Agency shows how sustainability can seize the avant-garde imagination, overriding (but not neglecting) the Bauhaus's attention to function, technique, and material. ■

Sources

Wood panels and windows: *Schindler GmbH*

Colored glass: *BGT-Glastechnik*

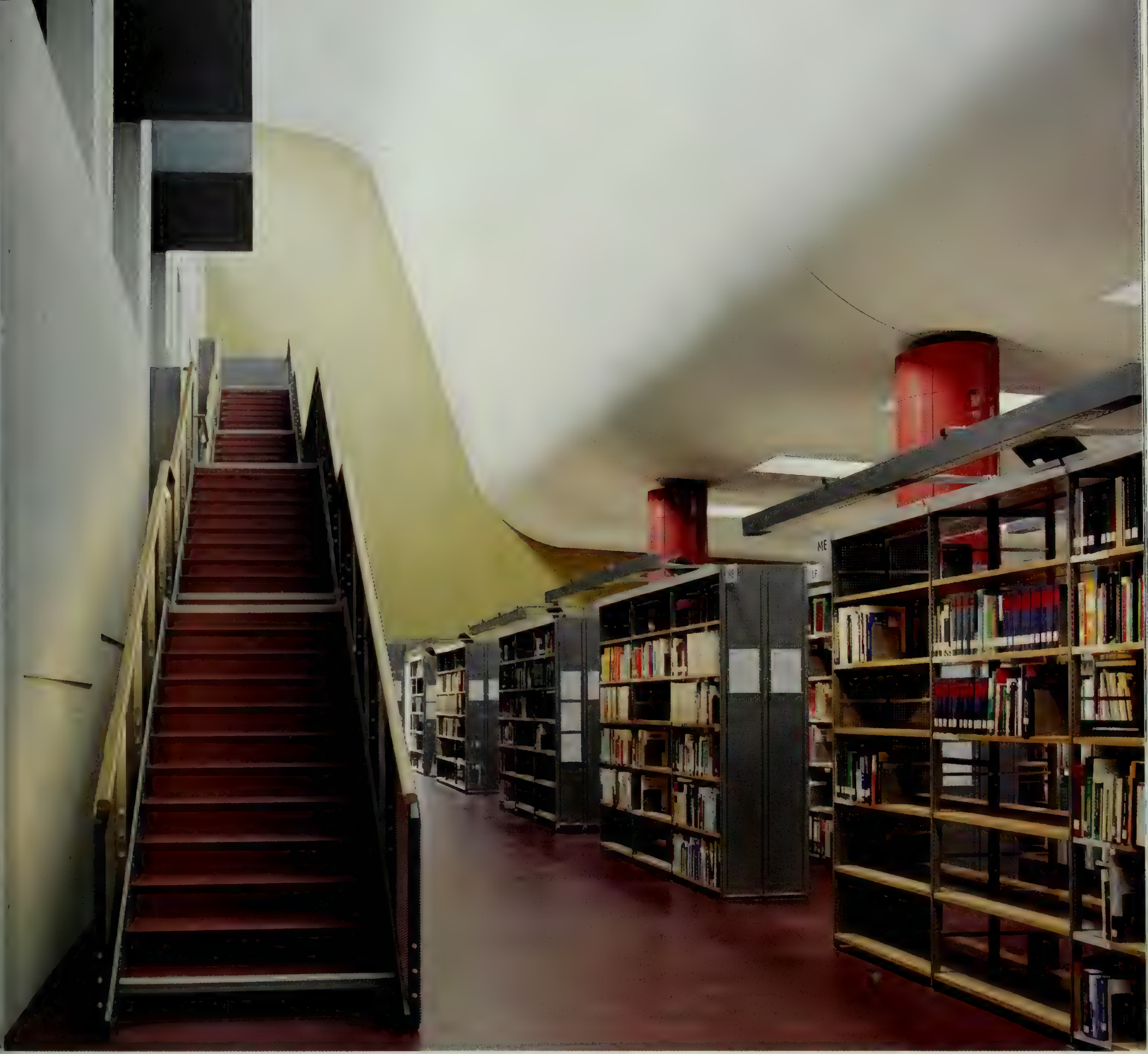
Serrated-glass roof and metal-and-glass curtain wall: *Brakel-Aero GmbH*

Steel for library and cafeteria facade: *ER+TE Stahl und Metallbau*

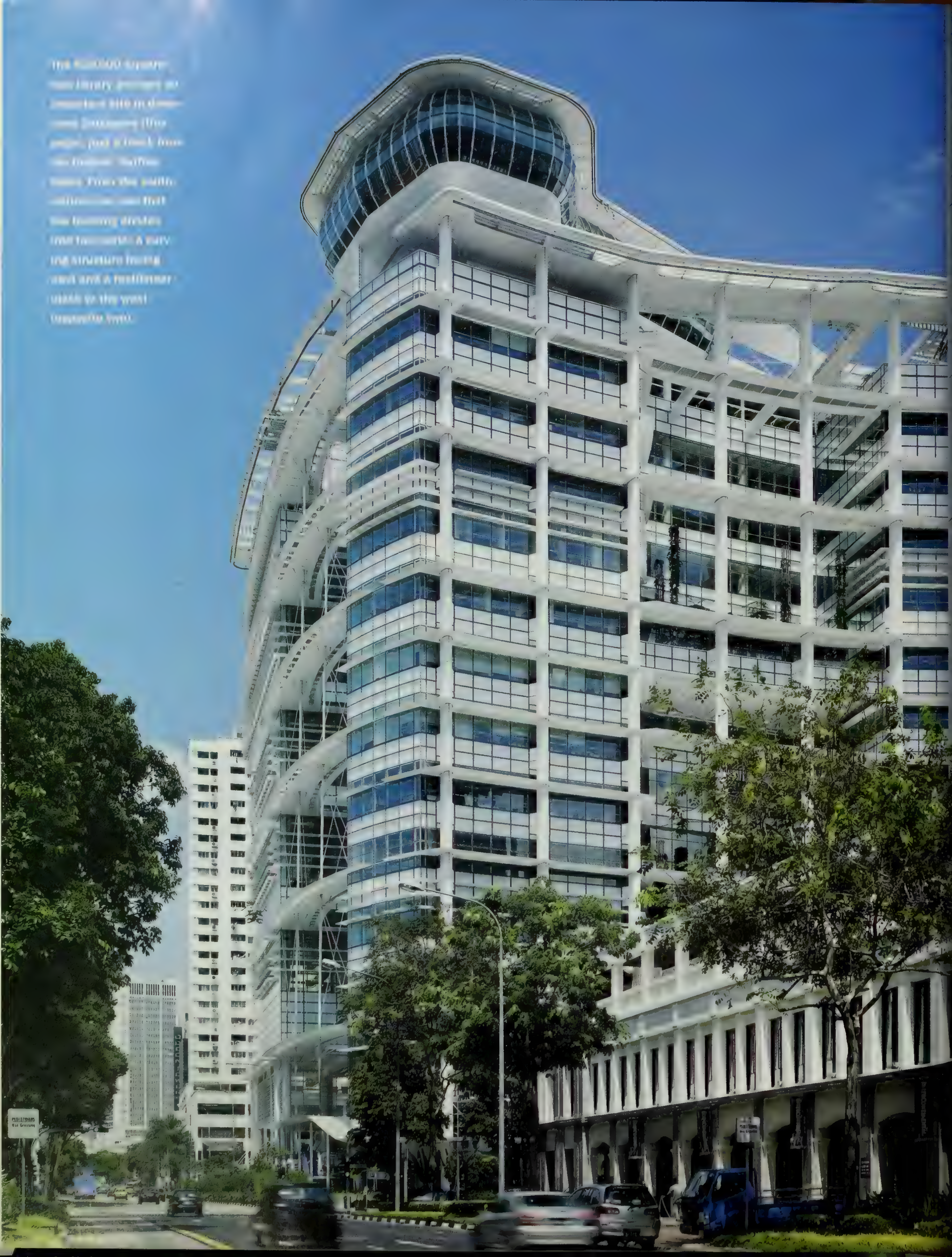
Masonry: *Peschek GmbH*

Built-up roofing and elastomeric: *Sinhor Dach GmbH*

For more information on this project, go to Projects at **www.archrecord.com**.



uerbruch Hutton renated a former factory ilding for the library, d linked it to the ain office complex th a structure whose of swoops up to a -foot height (above). ntrolled daylight rmeates the stacks the recycled library ilding (near left), d penetrates glazed erior corridors of the ice structure (right).



The [illegible]-square-foot library occupies an important site in downtown Singapore (this page), just a block from the historic Raffles Hotel. From the northwest, one can see that the building divides into two parts: a curving structure facing east and a rectilinear slab to the west (opposite, top).

T.R. Hamzah & Yeang applies its trademark bioclimatic design principles to the new NATIONAL LIBRARY in Singapore

Clifford A. Pearson

Ken Yeang has been preaching the green gospel for more than 30 years. He has written books with titles such as *Bioclimatic Skyscrapers* (1994), *Designing With Nature* (1995), and *The Green Skyscraper* (2000). He has participated in exhibitions :h as *Big & Green* at the National Building Museum in Washington, :. (2003), and served as a talking head in the recent ecodesign televi- n program *Design: e2*. He worked on a doctorate in ecological design the early 1970s, when most architects thought green was just some- ng you found on a Pantone card. And when he returned to his native ılaysia after school in England (the Architectural Association and mbridge University), he started designing modern buildings that rked with the local climate instead of merely fighting it with airtight velopes and lots of air-conditioning—buildings such as the Menara siniaga [RECORD, March 1993, Pacific Rim section, page 26] and the thrie Pavilion [RECORD, August 1998, page 81]. With his new National rary in Singapore, he has applied all this expertise to a building type en seen as resistant to energy-saving design and, in the process, has ated a civic icon for a city-state bent on leveraging knowledge as an nomic engine.

Libraries tend to fall into two basic categories—the fortified x and the refrigerator. The first protects books from temperature nges and ultraviolet rays by erecting thick walls with few openings,

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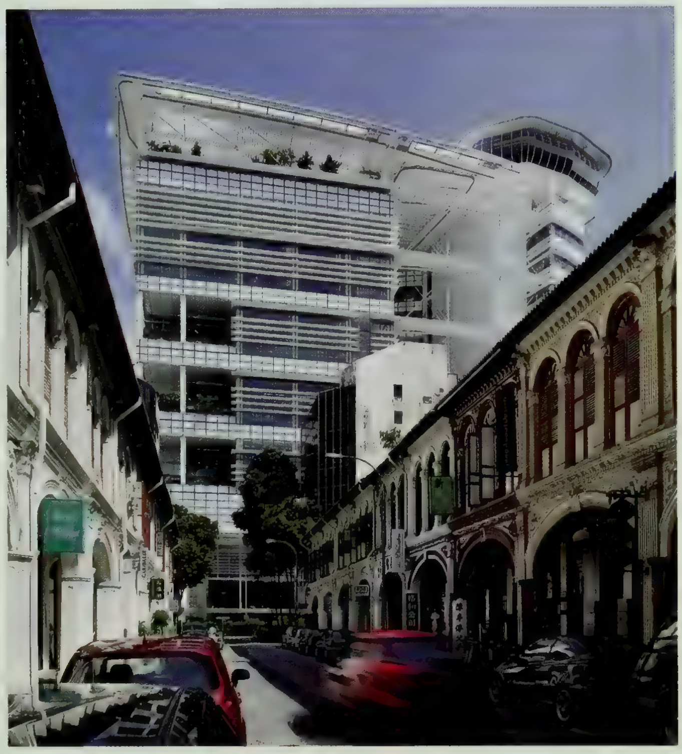
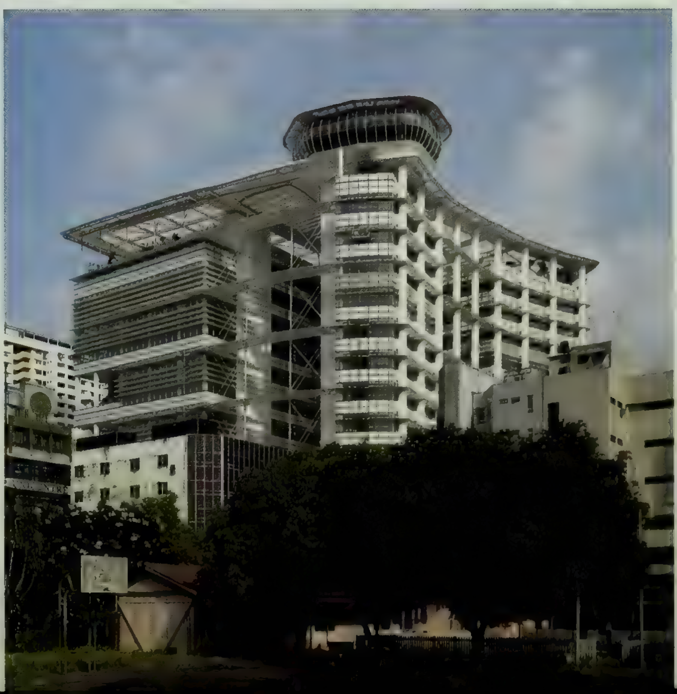
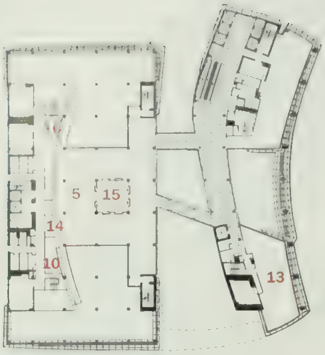
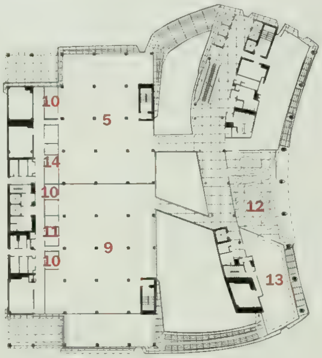
ject: *The National Library,*
gapore
ner: *National Library Board*
gapore
hitect: *T.R. Hamzah & Yeang—*
Yeang, principal in charge;
othy Andrew Mellor, Lim Hock
at, Chong Voon Wee, Rodney Ng,
iect architects; Rajiv Ratnarajah,
dent architect; Ridzwa Fathan,
gn director (schematics); Jason
ng, Monie Moharif, Yvonne Ho,
neth Cheong, Kevin Chung,
design architects
Architect of record: *DP Architects*
Engineer: *Buro Happold Singapore (structural, mechanical/electrical)*
Consultants: *Woodhead Wilson (interiors); DLQ Design (landscape); Lighting Planners Associates (lighting); Total Building Performance Team (acoustics); Arup Singapore (facade design); Ove Arup & Partners International (IT)*
General contractor: *Nishimatsu-Lum Chang Joint Venture*



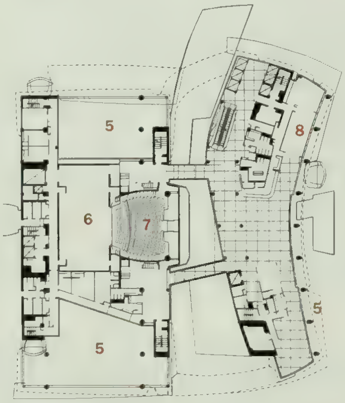




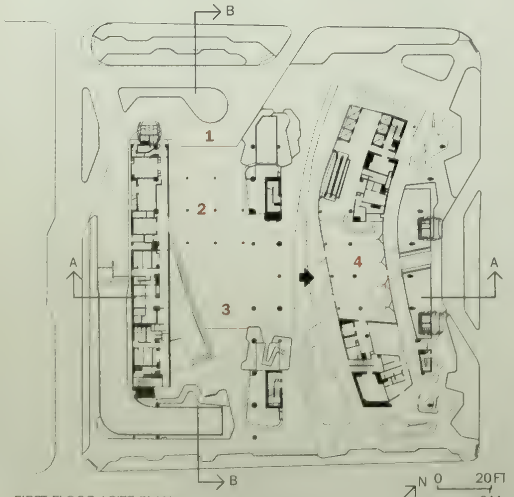
THIRTEENTH FLOOR



TENTH FLOOR

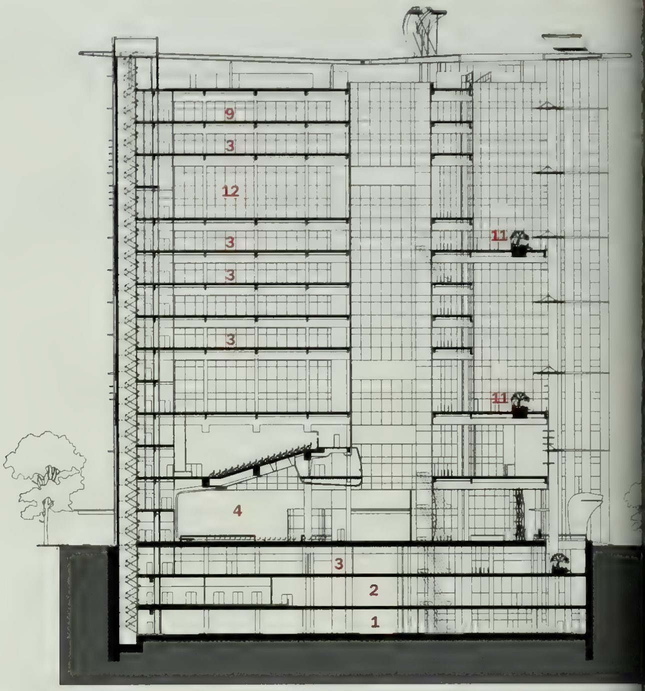


THIRD FLOOR

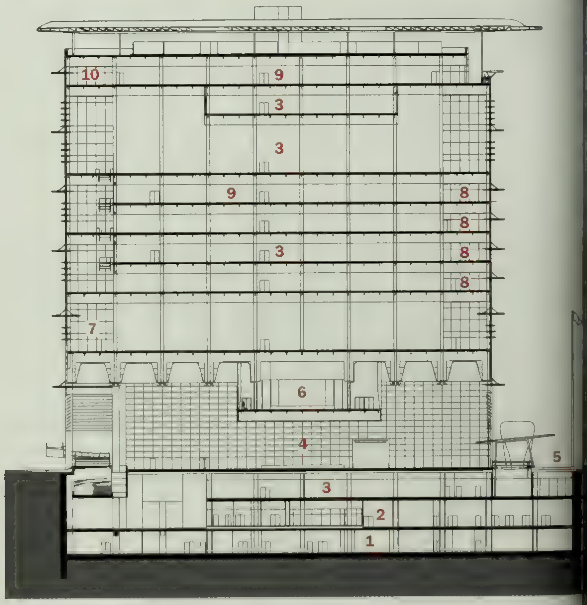


FIRST FLOOR / SITE PLAN

1. *Drop-off*
2. *Covered plaza*
3. *Outdoor dining*
4. *Information*
5. *Library collections*
6. *Drama center*
7. *Theater*
8. *Training*
9. *Offices*
10. *Meeting*
11. *Prayer*
12. *Skycourt*
13. *Exhibition*
14. *Staff*
15. *Rare books*
16. *Storage*

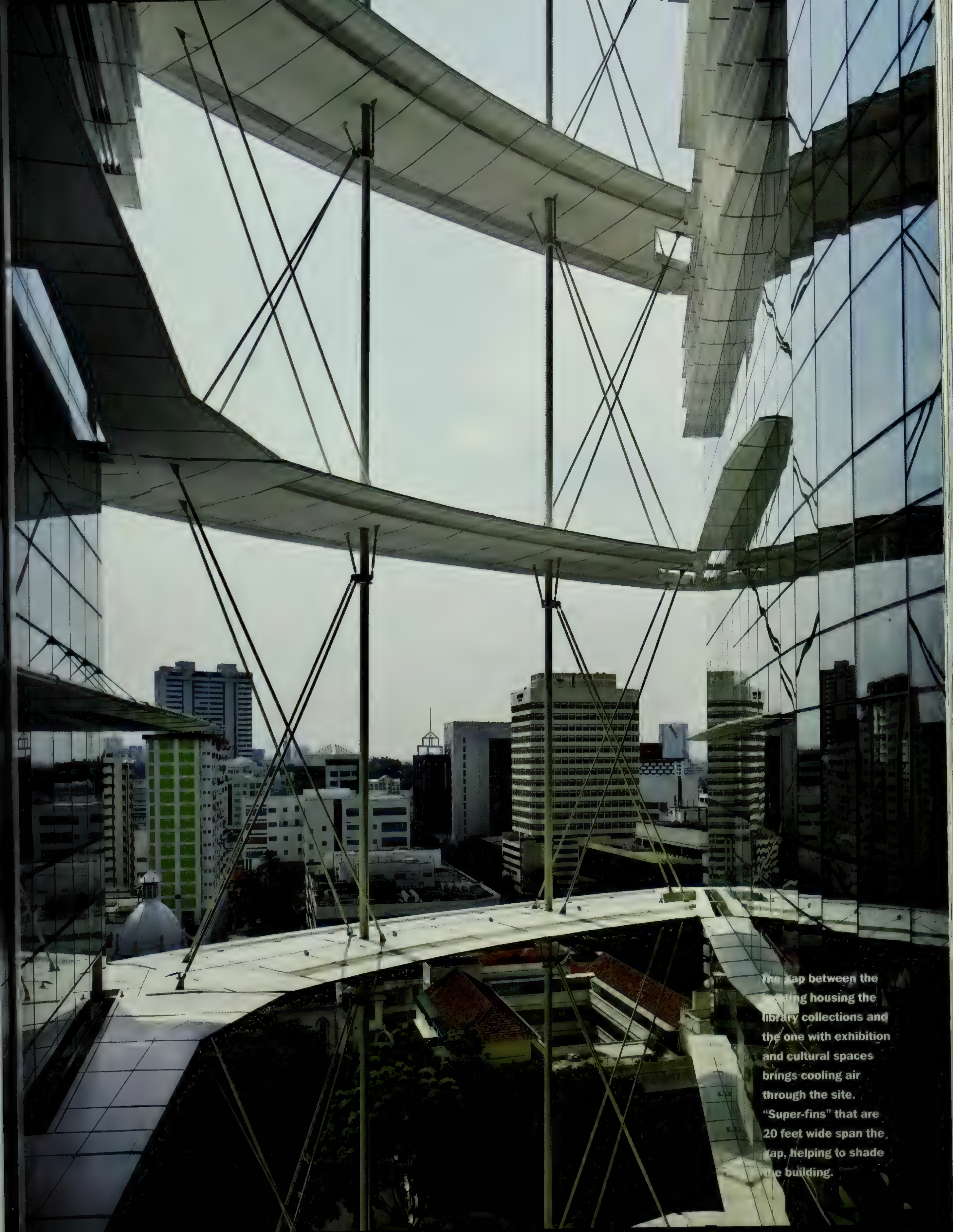


SECTION A-A

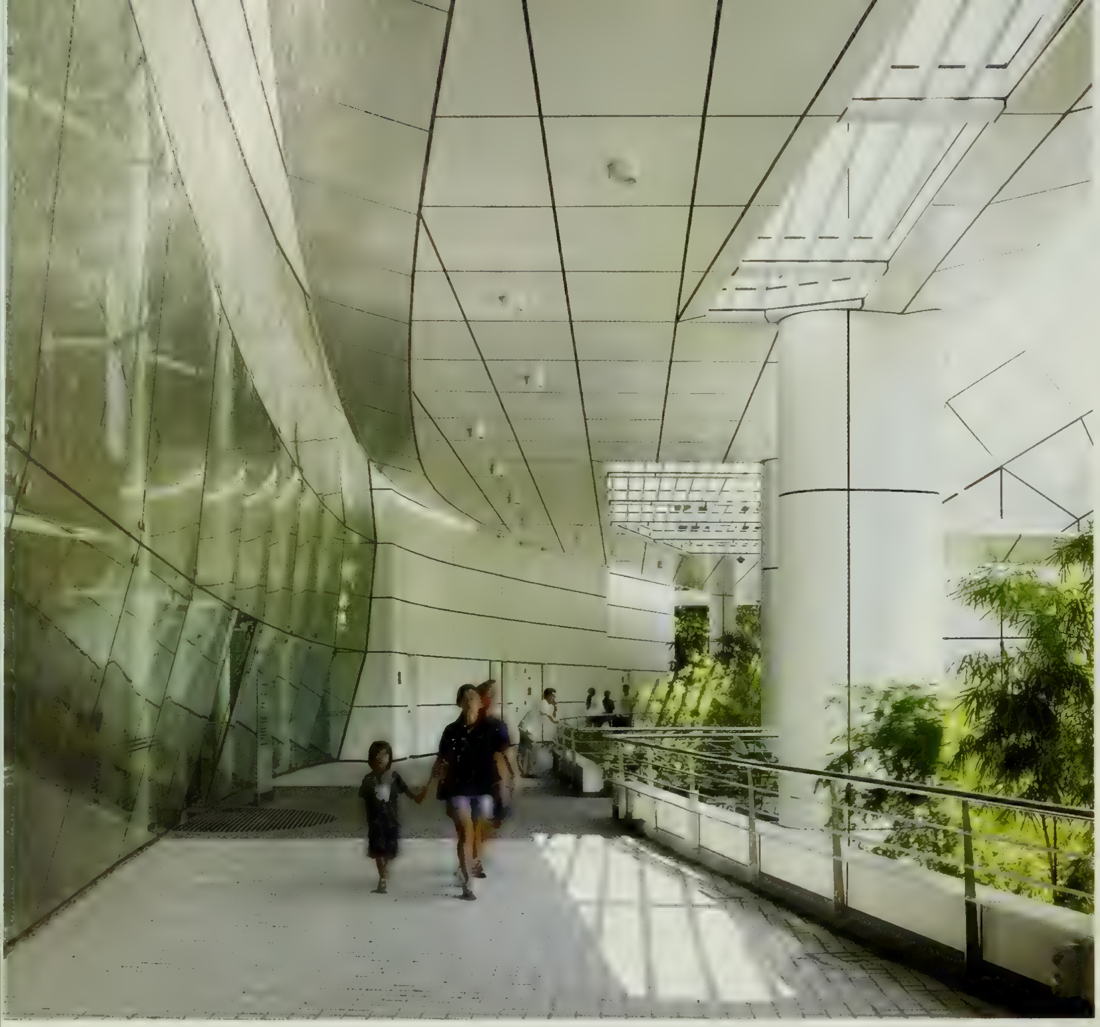


SECTION B-B

1. *Parking*
2. *Loading*
3. *Library collections*
4. *Covered plaza*
5. *Main drop-off*
6. *Theater*
7. *Theater administration*
8. *Reading*
9. *Library offices*
10. *Terrace*
11. *Skycourt*
12. *Periodicals*



The gap between the building housing the library collections and the one with exhibition and cultural spaces brings cooling air through the site. "Super-fins" that are 20 feet wide span the gap, helping to shade the building.



In a tropical place such as Singapore, shade rather than sun attracts pedestrians. The building's perimeter is protected by a series of glazed canopies (opposite), and visitors enter the library from a covered plaza underneath part of the building. A shaded walkway runs along the eastern side of the site (left), where a sunken courtyard brings daylight into the basement level.

WHAT MAKES THIS BUILDING GREEN?

- A variety of shading devices, including 20-foot-wide super-fins, protect the glass curtain wall.
- The building is separated into two blocks, and one is raised off the ground so wind cools the structure.
- Only parts of the building are fully air-conditioned; others are naturally ventilated or cooled by mechanical means such as fans.
- Sensors control light fixtures to reduce their use.
- Nearly 70,000 square feet of planted areas shade the building.

while the latter controls temperature by chilling interior spaces, albeit at the expense of energy efficiency. In his design for the National Library, Yeang explores a third way—harnessing cooling breezes, sun-shading devices, daylighting strategies, and planted terraces and skycourts to create a building that is both transparent and ecofriendly.

At first glance, the building seems to be trying a bit too hard to impress, with a sweeping facade on the east, a vast array of projecting blades and shelves, and a UFO-shaped viewing pavilion hovering above the roof. But these moves help animate what could have been a large, squat building—630,000 square feet and only 16 stories high. And by carving deep recesses and skycourts into the white blocky form, the architect creates a lively play of shadow and light that not only pleases the eye but offers cool spaces for people using the building.

When the National Library Board of Singapore held a design competition for the project in 1998, it didn't ask for a green building, recalls Yeang. "They were looking for a civic icon," he says. As the Singapore economy has shifted in recent years from an industrial base to one driven by information technologies and services, the government has undertaken the construction of sprawling educational campuses, some designed by high-profile international architects such as James Stirling/Michael Wilford [RECORD, May 1997, page 102] and Gwathmey Siegel [RECORD, December 2001, page 92]. Now it is trying to add a cultural layer to an urban mix that had previously emphasized shopping and eating as the island nation's primary spare-time activities. A new national library building in a busy part of downtown offered a chance to bring learning and culture together in an attention-grabbing venue.

Yeang's competition entry pulled the building into two separate parts—a banana-shaped structure on the east for exhibition spaces and cultural activities and a blockier structure on the west that would house the library collections and reading rooms. A tall atrium or semienclosed "street" would run between the two pieces, with bridges at the upper levels connecting the two sides. By raising the collections block one story off the ground, Yeang created a covered plaza at ground level that offers a large, shaded space for an outdoor café and all kinds of public events, such as book fairs and dance performances. The jury was impressed by the new civic space Yeang's design would offer the city and by the opportunities to program exhibition spaces on each floor in conjunction with the particular library collections on that level. "The client told me I made them rethink how a library works," says Yeang. In May 1999, the jury awarded Yeang the commission over designs by Michael Graves, Moshe Safdie, Mitchell/Giurgola, and Nikken Sekkei. Construction began in November 2001 and the library opened in November 2005 at a cost of $204 million. By the end of construction, Yeang had become a partner in the London firm Llewelyn Davies Yeang, which now serves as a sister company to his Kuala Lumpur–based firm T.R. Hamzah & Yeang.

As he does with all of his projects, Yeang started work on the National Library by figuring out the proper orientation of the building in relation to the sun and prevailing breezes. To block the impact of the

Central Lending Library
Fiction
Creative & Literary Arts
Business
Newspapers
I ♥ my Library
How has the library transformed your life?

**ɘ "pod" on top of the
ilding offers views
d space for special
ɘnts (right). Each of
ɪ library's collections
s its own reading
d stacks space and
ɡreat curving wall of
oks (opposite).**

ernoon sun, he lined up support and service areas for the collections
ɪng the western edge of the building, creating a climate buffer for the
ge reading rooms and open book stacks. On the east facade, he angled
ɛ building so the sun would deliver only glancing, not direct, blows,
d he protected the low-E glass curtain wall with plenty of protruding
ading planes and opaque spandrel glass. Slicing across the north and
ɹth ends of the open atrium, giant metal blades block direct sun rays
ɪile bouncing daylight deep into interior spaces. With their crossed-
el-cable bracing, these 20-foot-wide "super fins" recall the wings of old
ɔlanes and add a dash of derring-do to the north and south facades.
though most large buildings in southeast Asia have concrete frames,
ang and structural engineer Buro Happold Singapore designed a steel
ming system for the National Library, in part because steel is recyclable
d is faster to erect.

Raising the collections block off the ground not only creates a
blic plaza, but allows air to circulate and cool the building. Likewise,
ɛ covered atrium runs north–south to capture breezes (and to frame
ɛ view north to the historic St. Joseph's Church across Victoria Street).
installing louvers in the glass roof above the atrium, Yeang used con-
ction to pull hot air up and out of the space. And because the covered
ɪza and atrium aren't enclosed, he was able to convince the regulatory
thorities that these spaces shouldn't count as part of the building's
or area ratio.

Combining generous glazing with a variety of sun-shading
vices, Yeang was able to use daylighting for much of the interiors and
luce the library's dependence on electric light. Two sets of sensors (one
ɪt within the building perimeter and the other farther in) control light fixtures so illumination levels can remain adequate in each zone with the least amount of energy used.

The architect also used a zoning system for temperature control inside the building. Instead of treating all spaces the same, he customized climate control depending on the way each area is used. So the library collections, reading rooms, and theater are fully air-conditioned and lit with electric fixtures (what Yeang calls "full mode"), while the covered plaza is naturally ventilated and mostly daylit ("passive mode"), and transitional spaces such as lobbies and foyers use a combination of natural ventilation and mechanical means, such as fans ("mixed mode").

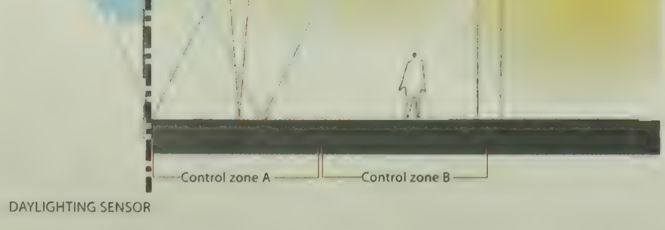
Yeang's buildings not only act green, they *are* green, thanks to his use of planted terraces and landscaped skycourts. For the National Library, he created nearly 70,000 square feet of such green spaces with planted corner terraces on most floors and six large skycourts spread throughout the building. "In nature, most things are a combination of organic and inorganic material," states Yeang. "We've tried to imitate that by bringing veggies deep into the building mass." In this project, the green material starts below the street, where he carved out a planted courtyard that brings daylight into the basement to create a bright, attractive space that serves as the lending-library floor. (Books in all other parts of the library do not circulate.) On the 5th and 10th floors, he cut into the east elevations to create 45-foot-high skycourts with large trees, winding paths, and benches.

In previous projects, Yeang had always tested his design ideas with computer and physical simulations during design development. But with the larger scale (and budget) of the National Library, he was able to run thermal, sun-shading, daylighting, and wind simulations at several

A large skycourt provides an outdoor green space for visitors to enjoy (above). Sensors help reduce the use of light fixtures (diagram below), as does plenty of daylight (above right).

stages in the process, fine-tuning his design at each step. As a result, he reduced projected energy consumption to 185 kilowatt hours per square meter per year, well below 230 kwh/m²/year, the amount used by a typical office tower in Singapore. After opening last November, the building ended up using 162 kwh/m²/year, below even the projections. In recognition of this, the Singapore Building and Construction Authority awarded the building the Green Mark Platinum rating, its highest.

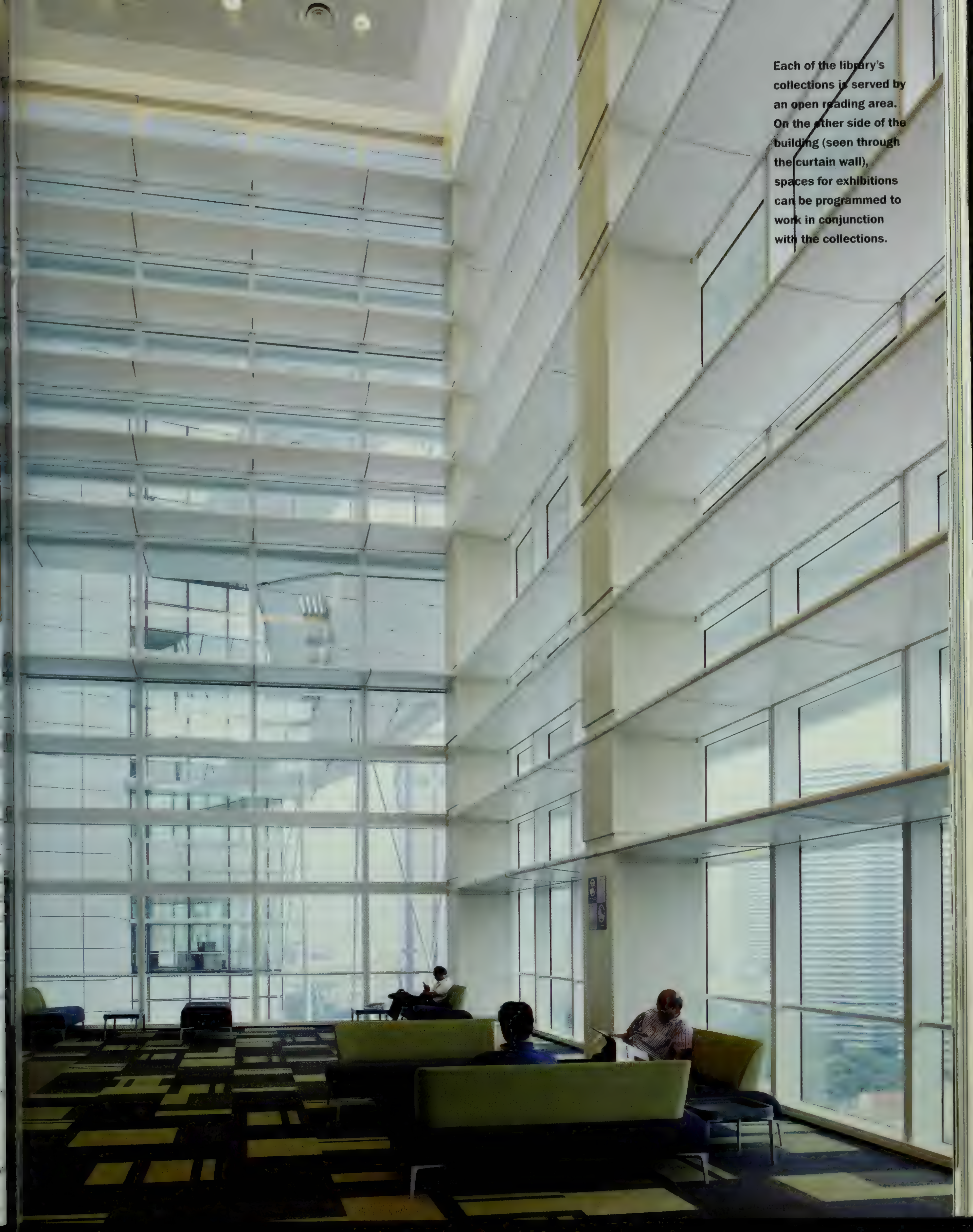
For Singapore, the National Library stands as a symbol of a new era. As the nation tries to shed its image as an efficient, but uptight, "nanny state," it hopes to unleash economic growth by encouraging its people to use their minds more than their muscles. (The new, more freewheeling climate even includes casinos, but that's another matter.) With his gleaming, ecofriendly design, Ken Yeang has given the country a building that points to a future in which information, environmental technologies, and cultural development lead the way. ■



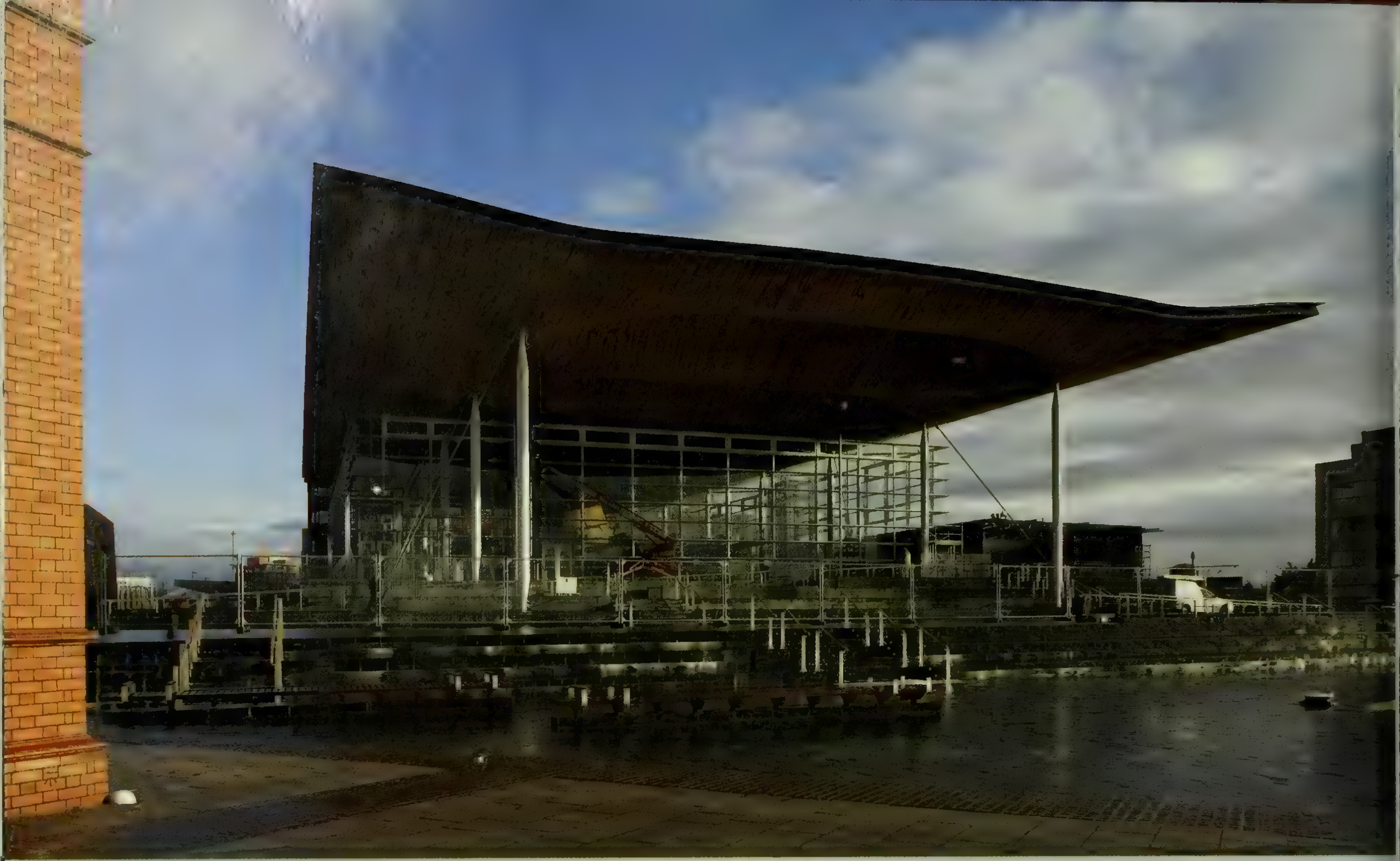
DAYLIGHTING SENSOR

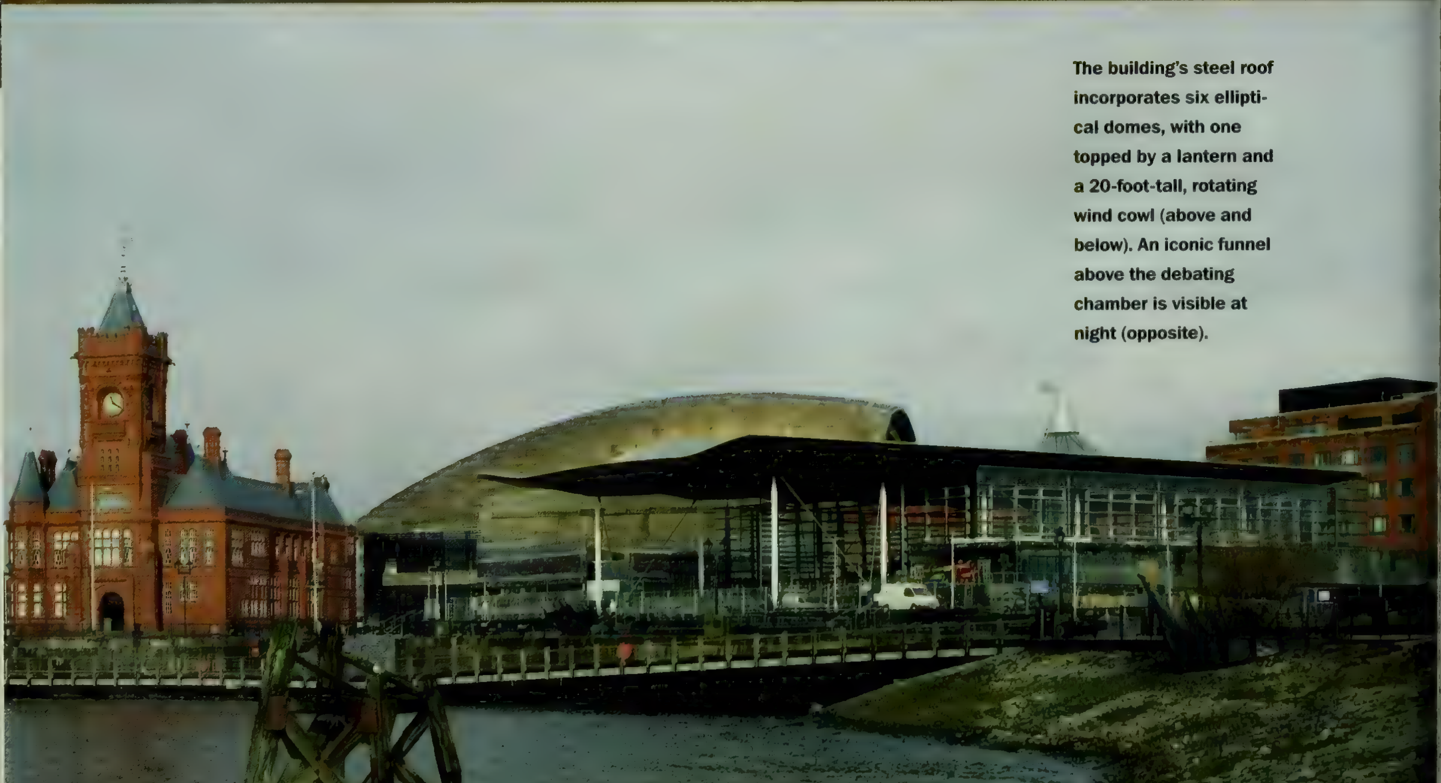
Sources

Structural steel: *Continental Steel*
Structural sealant: *Dow Corning*
Gaskets: *Gaintect*
Glazing: *Singapore Safety Glass*
Vision glass and spandrel glass: *AFGD Glass*
Pivot-swing entry doors: *Flamelite*
Paints and stains: *ICI Paints*
Composite interior panels: *Mitsubishi Chemical Functional Products*
Aluminum panels: *Alcom Malaysia*
Floor and wall tiles: *Leefon*
Carpeting: *Shaw Industries*
Auditorium seating: *Ergoworld; Besco Building Supplies*
Black-box seating: *Besco Building Supplies*
Upholstery: *Pacific Furnishing; Fabricnation*
Accessibility lift: *Fujitech Singapore*



Each of the library's collections is served by an open reading area. On the other side of the building (seen through the curtain wall), spaces for exhibitions can be programmed to work in conjunction with the collections.





The building's steel roof incorporates six elliptical domes, with one topped by a lantern and a 20-foot-tall, rotating wind cowl (above and below). An iconic funnel above the debating chamber is visible at night (opposite).

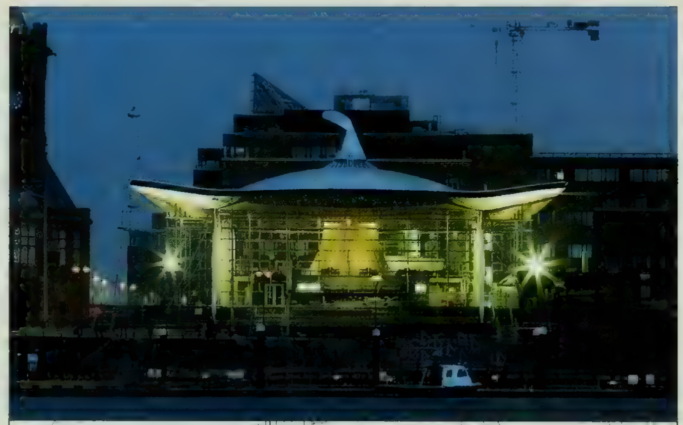
Richard **Rogers** used transparency and ecological responsibility as guiding values in his design for the **NATIONAL ASSEMBLY FOR WALES**

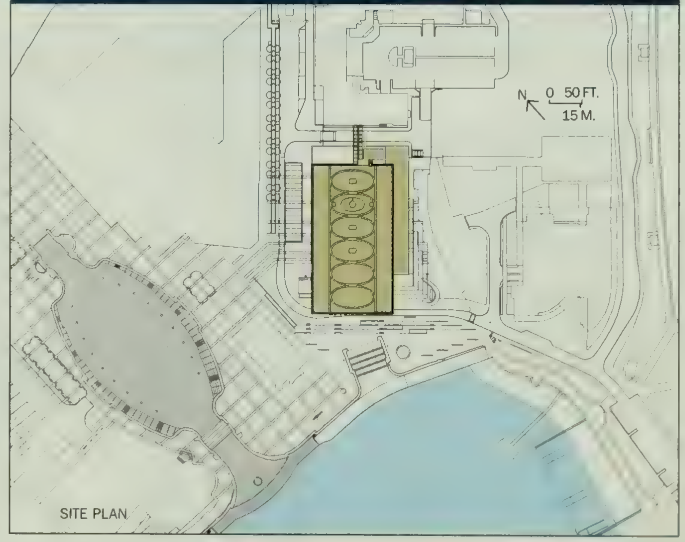
Catherine Slessor

For such a comparatively modest building, the new National Assembly for Wales was charged with immense political, economic, and architectural expectations. Politically, it represents the aspirations of the Welsh people, who voted for a degree of auton- y in their national affairs in a referendum in 1999. Though Wales has ectively been part of the United Kingdom for over four centuries, the dern principality sustains a strong nationalist movement, wary of what erceives as the remote and often overbearing power of Westminster, the ndon-based parliament. This desire for political autonomy is matched a highly evolved sense of Welsh identity and culture, exemplified by the urgence of the Welsh language, now extensively taught in schools and nipresent in a bilingual public realm.

Economically, the new Assembly was conceived as an impetus a broader program of urban ambition in Cardiff, which despite its tus as the Welsh capital is better known as a rough-around-the-edges t city. Poised on a pierhead and surrounded by disused docklands, the lding is a crucial catalyst for the redevelopment of Cardiff Bay, an area ghted by the collapse of heavy industries such as coal and shipping. hitecturally, the stakes were high with the commissioning of Richard gers, who prevailed in a limited competition by creating a physical d symbolic embodiment of Welsh nationhood and modern demo- tic government. Yet local reaction to the visions of high-profile hitects has not always been favorable. During the 1990s, Zaha Hadid's rted proposal for the Welsh Opera House on a nearby site on Cardiff proved a bitter triumph of petty provincialism over architectural ention. Doubtless mindful of Hadid's experience, Rogers treaded efully, but even so, costs rose from an original budget of £27 million 9 million) to a final £67 ($121.5 million), leading to design changes d a baffling procurement saga that involved Rogers being sacked from project and subsequently reinstated.

Compared to the overwrought Scottish Parliament [RECORD, ruary 2005, page 98] by the late Catalan magus Enric Miralles and his low Benedetta Tagliabue, the Welsh Assembly is a simpler, more legible an proposition. Transparency and physical openness were key tenets of building's program and were decisively resolved in the form of a glazed ilion set on a massive plinth clad in dark Welsh slate. Sunk into the dense, logical plinth is a subterranean debating chamber illuminated by an immense conical funnel that tapers up through the glazed pavilion to pierce a hovering roof plane. Ripping and swelling like a shaken carpet, the contoured underside of the roof is lined with thin strips of untreated red cedar. Slender steel columns support the undulating roof as it extends beyond the Miesian glass box to form a dignified and welcoming colonnade.





SITE PLAN

The composition reflects the strong public/political duality of the building's internal organization. The politicians' domain, a hermetic

herine Slessor is the managing editor of Architectural Review *in London.*

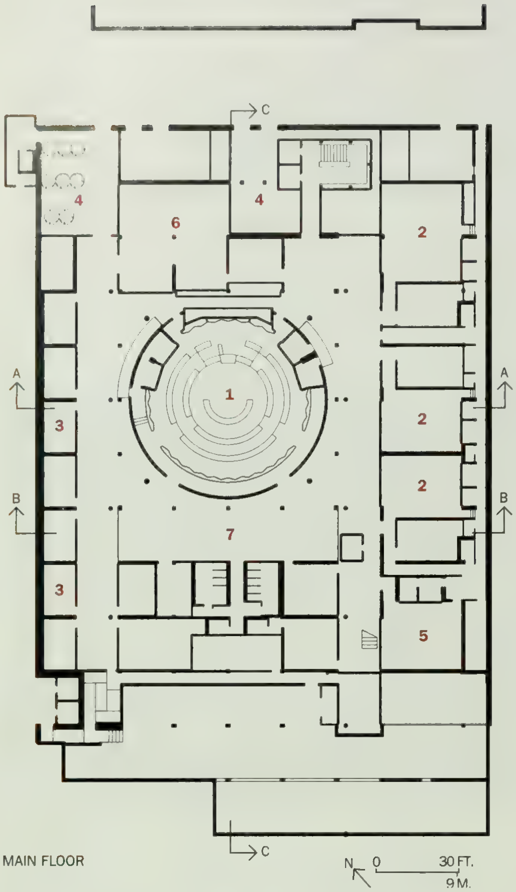
Project: *National Assembly for Wales, Cardiff, Wales*

Architect: *Richard Rogers Partnership—Richard Rogers, principal; Ivan Harbour, project director; John Lowe, project architect*

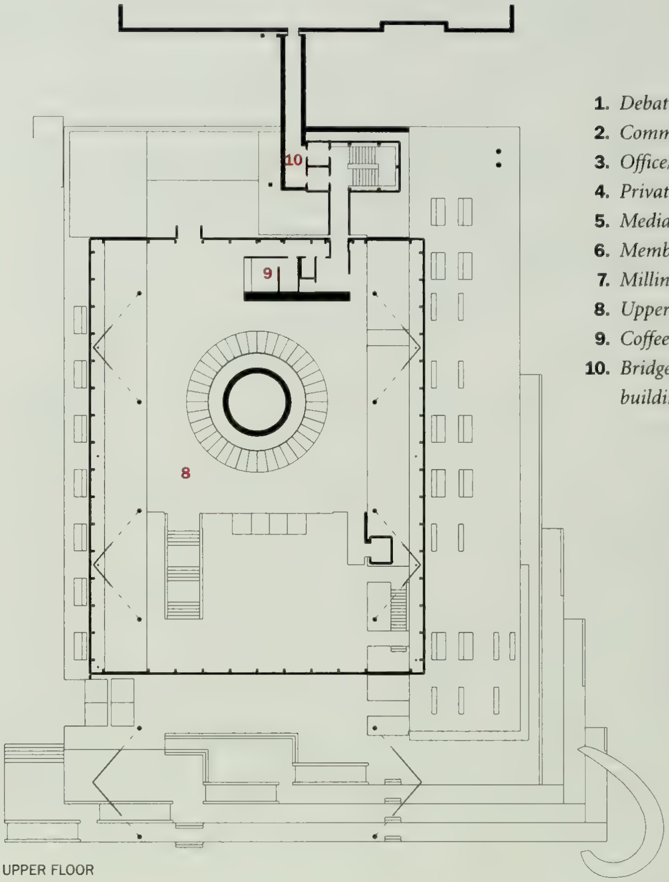
Engineer: *Arup (structural, wind)*

Consultants: *BDSP (environmental); Gillespies (landscape)*

General contractor: *Taylor Woodrow*

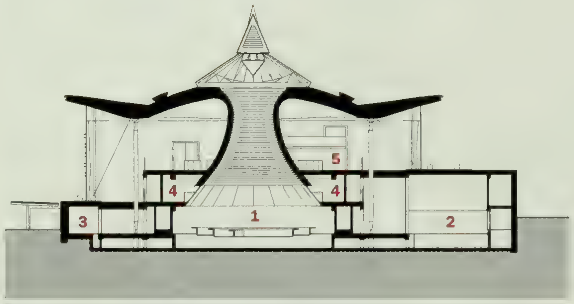


MAIN FLOOR

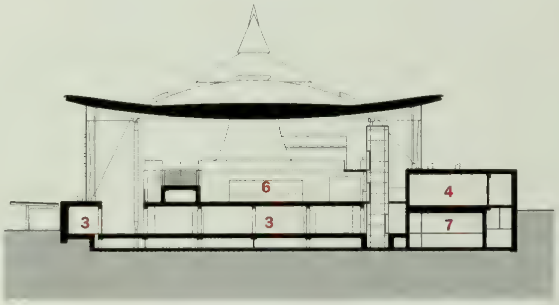


UPPER FLOOR

1. *Debating chamber*
2. *Committee room*
3. *Office/meeting room*
4. *Private courtyard*
5. *Media briefing room*
6. *Members tea room*
7. *Milling space*
8. *Upper foyer*
9. *Coffee shop*
10. *Bridge to existing building*

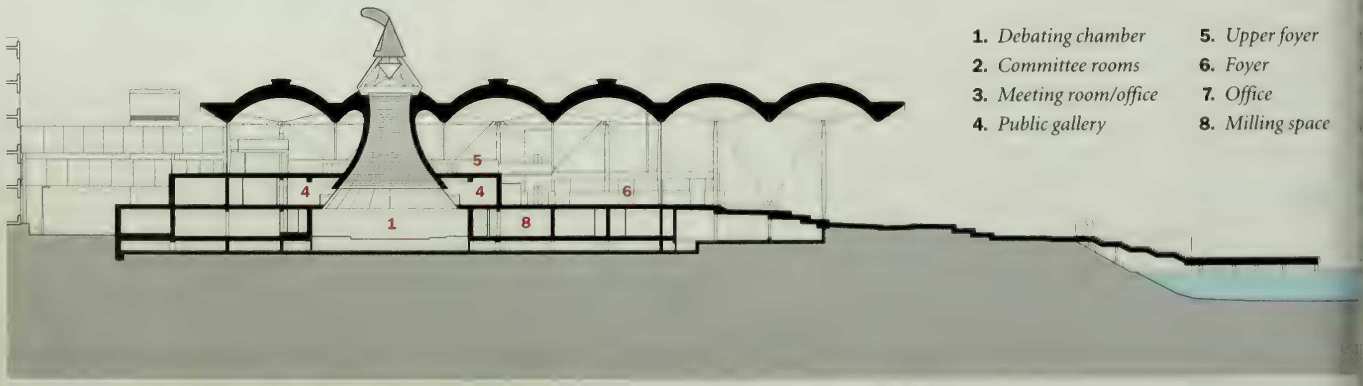


SECTION A-A



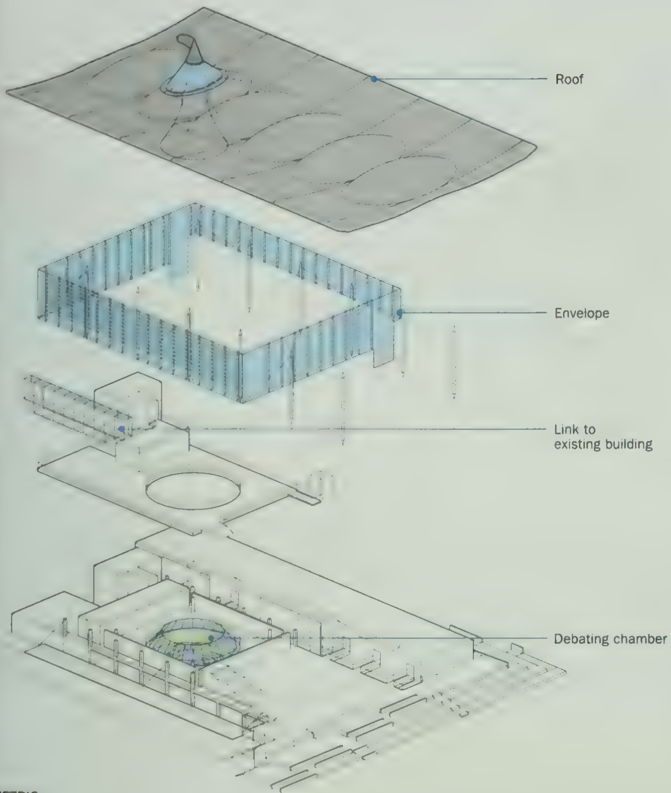
SECTION B-B

Two of the building's three floors are ope to the public. An exis ing structure behind the assembly provid administrative and office space and is connected to the ne building by a bridge the upper level.

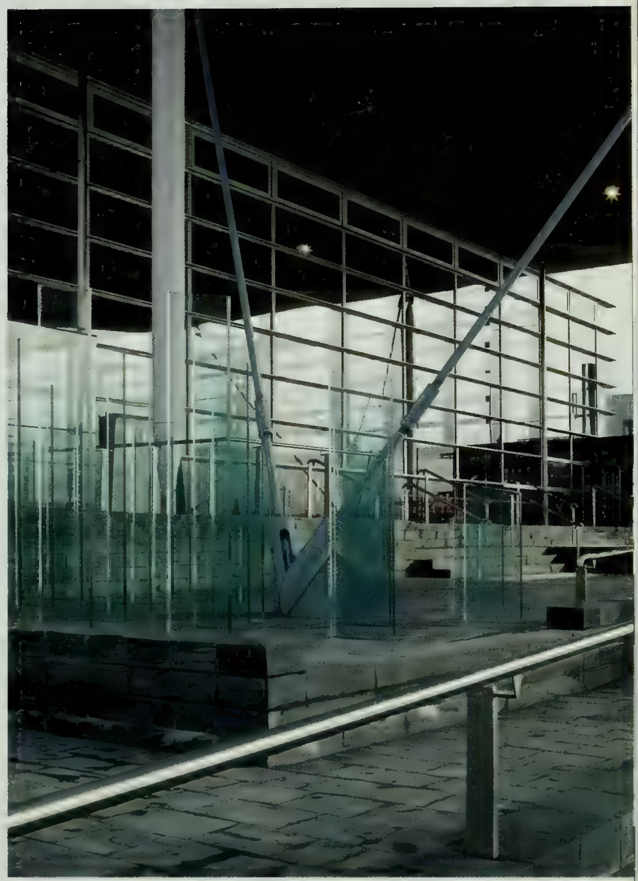


1. *Debating chamber*
2. *Committee rooms*
3. *Meeting room/office*
4. *Public gallery*
5. *Upper foyer*
6. *Foyer*
7. *Office*
8. *Milling space*

SECTION C-C



ONOMETRIC

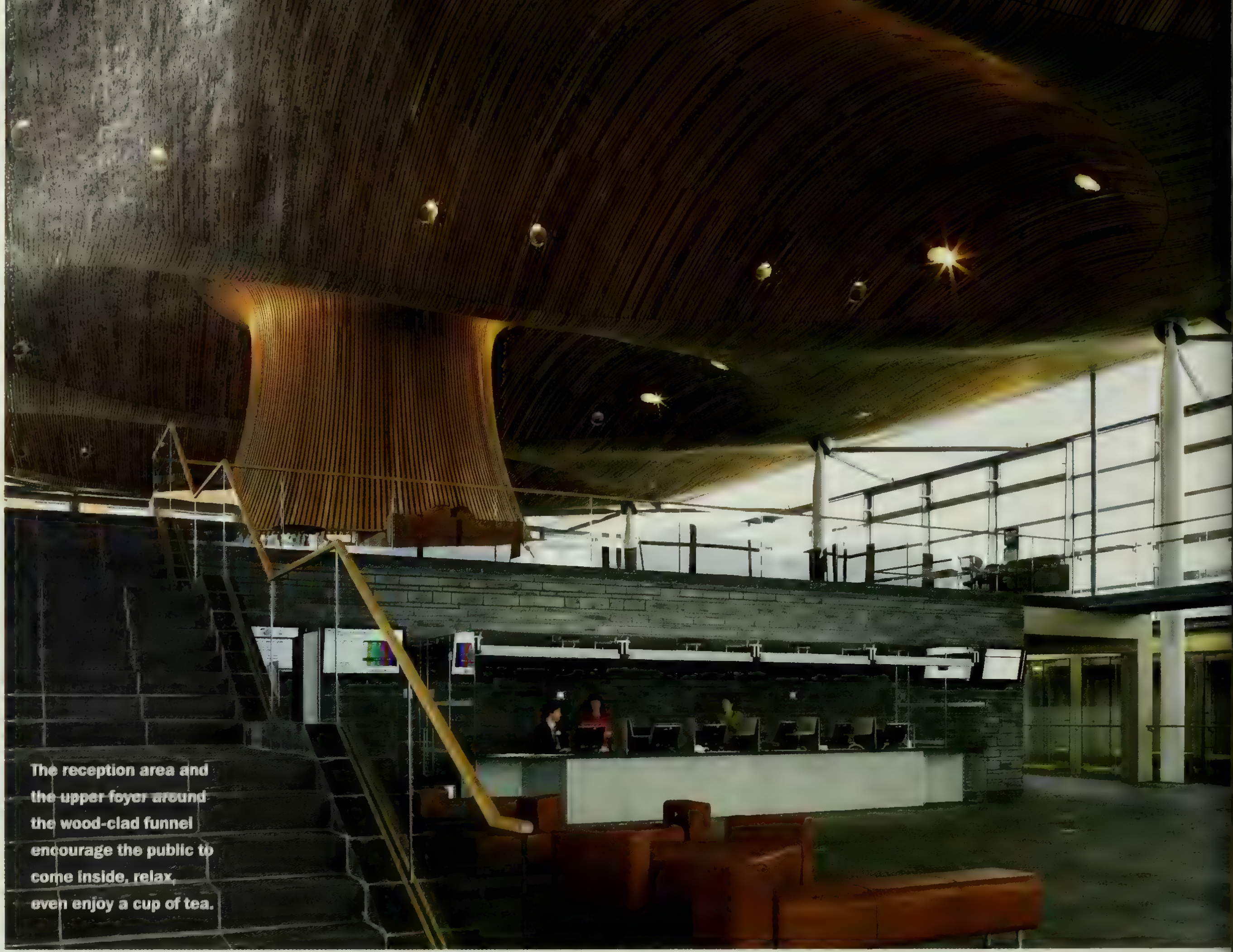


Dark slate creates a plinth for the glass pavilion to sit on (above right) and is brought inside the building for flooring in the main public areas (right). Welsh oak appears on much of the furniture and fittings.

ıderground labyrinth of debating chamber, press facil-
ies, and meeting and committee rooms, is placed
ıderneath the plinth, while the lighter, more open pub-
: spaces are elevated above it. In effect, the shimmering,
azed pavilion becomes a kind of civilized urban living
ıom, where the public is at liberty to wander, once the
ɔligatory airport-style security has been negotiated.
ere visitors can savor the views across Cardiff Bay, hang
ıt in a café, take in impromptu music or theater per-
rmances, or watch televised relays of the more serious
oceedings in the chamber below. Sculptural Arne
cobsen seating adds a touch of Scandinavian elegance.

In a riposte to the Westminster parliament, which encourages
ɪnfrontation through its historic arrangement of opposing banks of seat-
g, the circular form of the Welsh debating chamber is consciously
ıti-adversarial. The 60 seats are arrayed concentrically, with more senior
ıbinet members occupying the innermost circle. A public gallery with
gh-backed, pewlike seats overlooks the chamber, giving it the intimate
ɔpeal of a theater-in-the-round. Post 9/11, the original aim of making
ıis space a single, fluid entity was regretfully but understandably modi-
ɜd, so now politicians are physically separated from the public by an
ıgled screen of toughened glass. Other enhanced security measures
clude blast resistance in the glazed walls, cunningly and seamlessly incor-
ɔrated in a series of lateral restraining ties.

Daylight infiltrates the debating chamber through the apex of the
eat conical funnel, aided by an array of reflective tubes and mirrors.
riginally the building was to have three such protrusions, but require-
ents changed. The lone funnel now emphatically signals the presence of



The reception area and the upper foyer around the wood-clad funnel encourage the public to come inside, relax, even enjoy a cup of tea.

WHAT MAKES THIS BUILDING GREEN?

- Extensive use of daylighting in public spaces.
- Reflective tubes and mirrors bring daylight into the debating chamber in the basement.
- Air is cooled by drawing it into a plenum at the base of the building, then distributed through the space.
- Natural ventilation.
- Wind cowl on top of conical funnel harnesses wind for ventilation.
- Geothermal heat-exchange via 30 boreholes 330 feet deep.

the underground chamber, and also plays a key role in the building's environmental control strategy. Issues of environmental impact and sustainability were identified as significant at the competition stage and the Rogers team responded with a design that relies mostly on natural ventilation, with the building's concrete frame and slate plinth contributing thermal mass. Air is drawn into a large plenum at the base of the building and into the committee rooms and out through vents in the ceiling skylights. The great funnel of the debating hall is capped by a 20-foot-tall rotating wind cowl (the largest in Europe), which tracks and harnesses the wind to ventilate the chamber. This principle is a modern interpretation of the traditional oast house where a cowl is employed to draw air through hop-drying kilns. And for guides showing parties around the building, associating politicians with hot air offers limitless quip potential.

The assembly also has a geothermal heat-exchange system, comprising 30 boreholes drilled 330 feet deep into the ground. Refrigerant is pumped into the boreholes and through a heat exchanger. In summe
cool air extracted from the earth supplements natural ventilation. As th
ground around the holes progressively warms up over the hot season, th
system can be used in reverse during winter months to heat the building
A conventional cooling plant kicks into action only on very hot days (rar
in wet, windy Cardiff), and a woodchip boiler provides an extra boost i
winter's chill. More general issues of sustainability involved the specification of local materials to reduce transport and energy costs, such a
Penryn slate and Welsh oak.

The new Assembly synthesizes issues of literal and metaphorica
transparency, structural ingenuity, and environmental consciousness int
a dignified yet accessible expression of the role of politics and governmen
in a modern society. It makes no bombastic nationalistic statement, ye
clearly and lyrically celebrates Wales. Hopefully the quality of the politic
will live up to the quality of the architecture. ■

Sources

Glazing: *Haran Glass*

Roofing: *Lakesmere*

Glazing for elevator shaft: *Astec Projects*

Outdoor stone paving: *Marbrerie Allard & Fils*

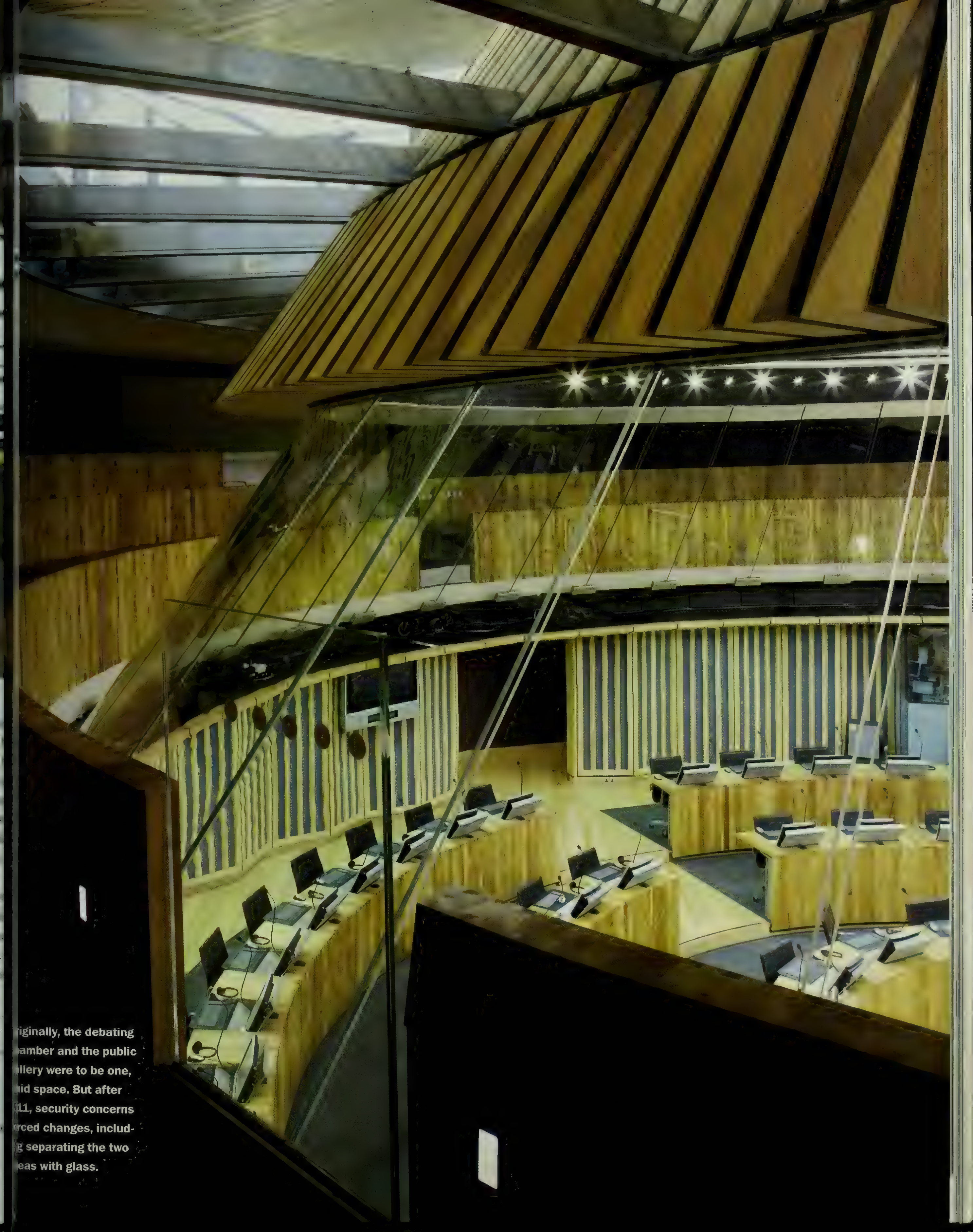
Boardwalk: *Dean & Dyball*

Ventilation cowl/inverted mirror cone in debating chamber: *Vision*

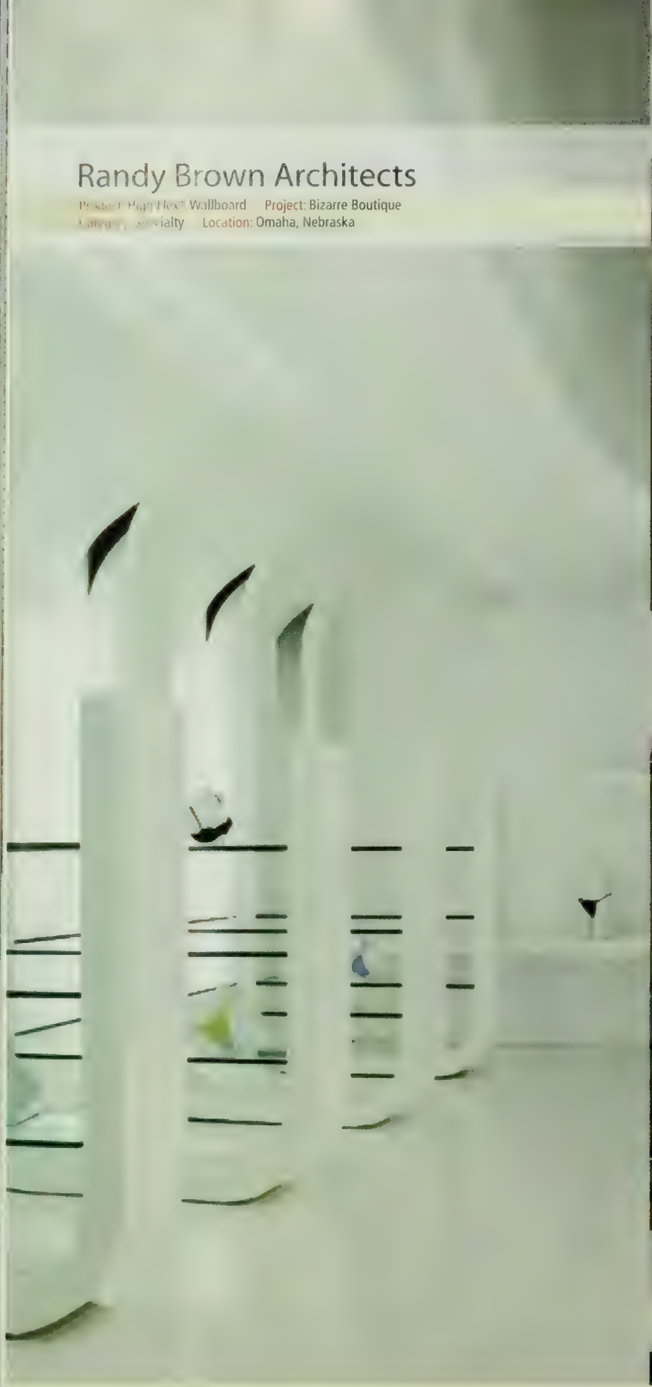
Lighting: *Whitecroft Lighting*

Movable furniture: *Attic 2*

For more information on this project go to Projects at **www.archrecord.com**.



riginally, the debating
amber and the public
llery were to be one,
uid space. But after
11, security concerns
rced changes, includ-
g separating the two
eas with glass.



Randy Brown Architects

Product: High Flex® Wallboard Project: Bizarre Boutique
Category: Specialty Location: Omaha, Nebraska

Koonce Pfeffer Bettis, Inc.

Product: Hi-Impact® XP® Wallboard Project: Alaska Psychiatric Institute
Category: Institutional Location: Anchorage, Alaska

KKE Architects, Inc.

Product: Hi-Impact® XP® Wallboard Project: Hassan Elementary School
Category: Educational Location: Rogers, Minnesota

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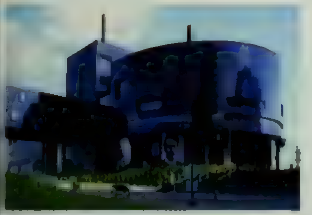
PERFORMING ARTS

Building Ovations

For all the stories of struggling orchestras and embattled theater troupes, halls that offer a superior audience experience are drawing wide community support.



GUTHRIE THEATER

Minneapolis, Minnesota

In this famed theater's new home, Jean Nouvel layers evocative imagery, theatrical lighting, and dramatic formmaking to help audiences enter the actors' world.

LUXEMBOURG PHILHARMONIE

Luxembourg City, Luxembourg

Christian de Portzamparc animates a monumental setting with the lively spatial dynamism and acoustic excellence of a grand concert venue designed to serve a wide range of music.

HOLLAND PERFORMING ARTS

Omaha, Nebraska

A transparent, lanternlike lobby invites the public to experience Omaha's new arts center, with its luminous auditorium, by HDR in collaboration with Polshek Partnership Architects.

By James S. Russell, AIA

New theaters bring viewers as close as possible to the art being created onstage, whether by actors, musicians, or singers. In an iPod and video-on-demand age, excellent sight lines and superior acoustics are requirements, not luxuries.

In Minneapolis, Ateliers Jean Nouvel (with Architectural Alliance) enhanced the thrust-stage design on which the Guthrie Theater built its national reputation, while adding a proscenium theater calibrated to draw audiences deeply into the psychological intensity that is the bedrock of modern theater. The classic shoe-box shape of the Luxembourg Philharmonie can deliver full, rich sound, but Christian de Portzamparc overcame the configuration's shortcoming—a lack of visual intimacy—by wrapping towers of seating around the orchestra seats and the stage. Omaha may not be a large city, but it aspires to boost both musical and civic life with an elegant orchestral space (by the Polshek Partnership collaborating with locally headquartered HDR) in its Holland Performing Arts Center.

It's no secret that performing-arts facilities are seen as economic-development tools, even in Europe, where the Philharmonie is supposed to spice up a city rather too devoted to the Eurocrat banquet. In recent years, performing arts have become more widely recognized as expressions of urban vitality and civic achievement—qualities more valuable than tourists per seat.

But that also means that these structures take a place much more central to civic life, symbolized boldly in Minneapolis by the "endless bridge" that spectacularly unites the introverted nature of theater with panoramas of the city and the Mississippi River. The Guthrie shares its theatrical use of color with de Portzamparc's Philharmonie, a glowing lantern by night that enlivens the dour facades of the pan-European institutions that surround it. The Holland Center eschews architectural fireworks, yet opens the rich life within to the increasingly lively streets of downtown Omaha.

Major facilities designed for enhanced audience expectations are opening all over North America. The Four Seasons Center for the Performing arts, by Diamond & Schmitt, opened last June in Toronto. This fall brings the completion of the Schermerhorn Symphony Center, in Nashville (David Schwartz, architect), and two venues by Cesar Pelli: the Performing Arts Center of Greater Miami and Segerstrom Hall in the Orange County Performing Arts Center, in Costa Mesa, California. Given such wide community support, the future of art created by real people in front of real audiences looks rosy indeed. ■

more information on these projects, go to Building Types Study at
ww.archrecord.com.

One: GUTHRIE THEATER

Minneapolis, Minnesota

Ateliers Jean Nouvel prepares audiences for the artifice of drama with ghostly imagery, bold colors, and bravura form.

By James S. Russell, AIA

Architect: *Ateliers Jean Nouvel—Jean Nouvel, Bertram Beissel, Brigitte Metra, Vincent LaPlante, Nathalie Sasso, Eric Stephanie, Anna Ugolini, Damien Faraut, Michel Calzada, Athina Faraut, Edwin Herkens*
Architect of record: *Architectural Alliance—Tom DeAngelo, FAIA, Bob Zakaras, AIA, Scott Sorenson, Ken Sheehan, AIA, Ross Naylor, Assoc. AIA, Jim Mornes, AIA, Jeff Loeschen, Assoc. AIA, Aaron Mullins*
Client: *The Guthrie Theater*
Engineers: *Ericksen Roed & Associates (structural); Michaud Cooley Erickson (m/e)*
Consultants: *Fisher Dachs Associates (theater); L'Observatoire International (lighting); The Talaske Group, Kahle Acoustics (acoustics)*

Size: *285,000 square feet*
Cost: *$125 million*
Completion date: *June 2006*

Sources
Aluminum sandwich panel: *Centria*
Paint on panel: *Valspar*
Glass: *ISG; Viracon; Rochester Glass; Oldcastle Glass*
Exterior graphics: *Artistic Screening*
Doors: *Jamison Door Company; Skyfold Autolift Wall Systems; Won-Door Corporation; Total Door; Electir Power Door; Schweiss Bi-Fold Doors*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

The bladelike form that projects 178 feet from the shimmering, midnight-blue bulk of the Guthrie Theater sums up everything willfully idiosyncratic yet keenly intuited about Jean Nouvel's design. What he calls "the endless bridge" extends a two-story lobby inside, offering a sublime connection between Minneapolis's downtown and the long-isolated banks of the Mississippi River. That attention-grabbing form will certainly become iconic, but the dreamlike procession Nouvel built inside almost subconsciously prepares patrons for the unique "reality" of dramatic artifice.

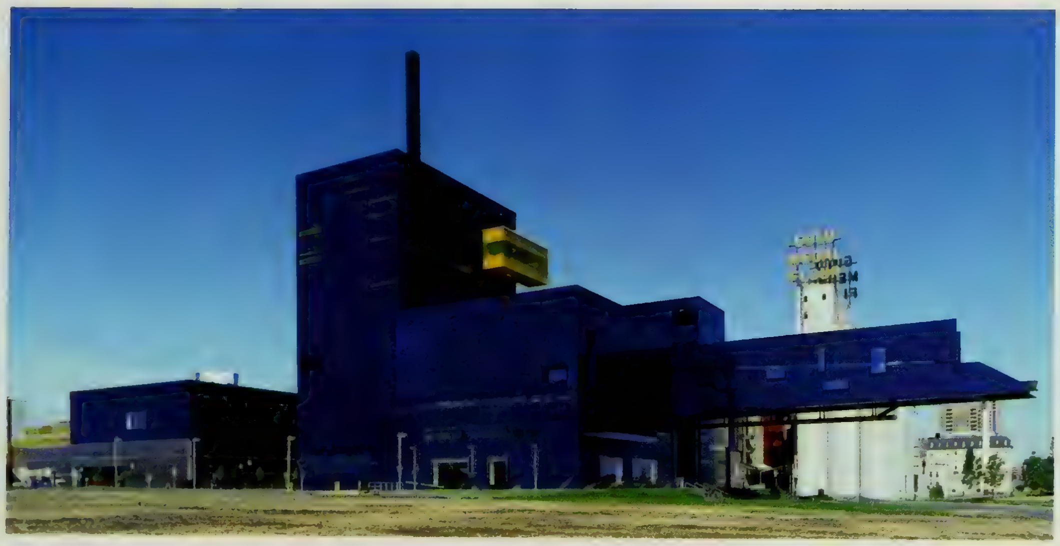
In making a presence that is urban, yet architecturally and theatrically evocative, Jean Nouvel (with Minneapolis-based firm Architectural Alliance) realizes the expansive vision of Joe Dowling, the Guthrie's artistic director. He speaks of the $125 million building that opened in June as "an artistic, architectural, and economic force on the banks of the Mississippi."

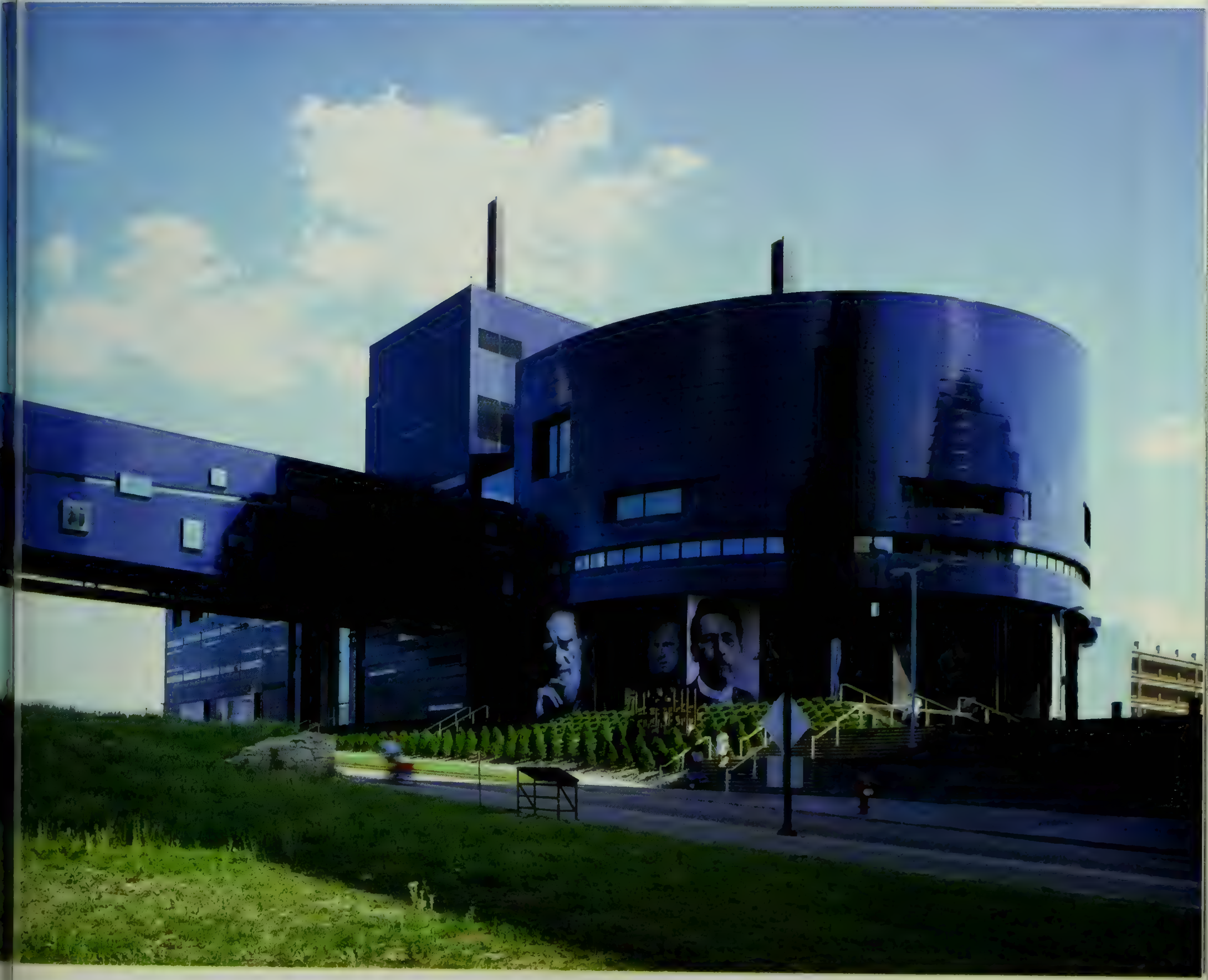
Program

Dowling wanted to reproduce the thrust stage that had become the theater's signature. The stage, pioneered by legendary director Tyrone Guthrie, who founded the theater in 1963, juts into the audience bowl with an asymmetrical platform, creating a uniquely involving and intimate, in-the-round experience. (Guthrie worked with renowned local architect Ralph Rapson. The much-altered original will be torn down.) Dowling added a conventional proscenium theater, which the Guthrie had never had. Its distinct division between audience and players would "get beyond the limitations of the thrust stage," he said in an interview. Those limitations include props that can block views, and the necessity for actors to constantly move around to include the audience on all sides. The new structure also brings to the Guthrie a home-based black-box studio. With its expanded learning spaces, Dowling sees the new Guthrie as not just one of America's

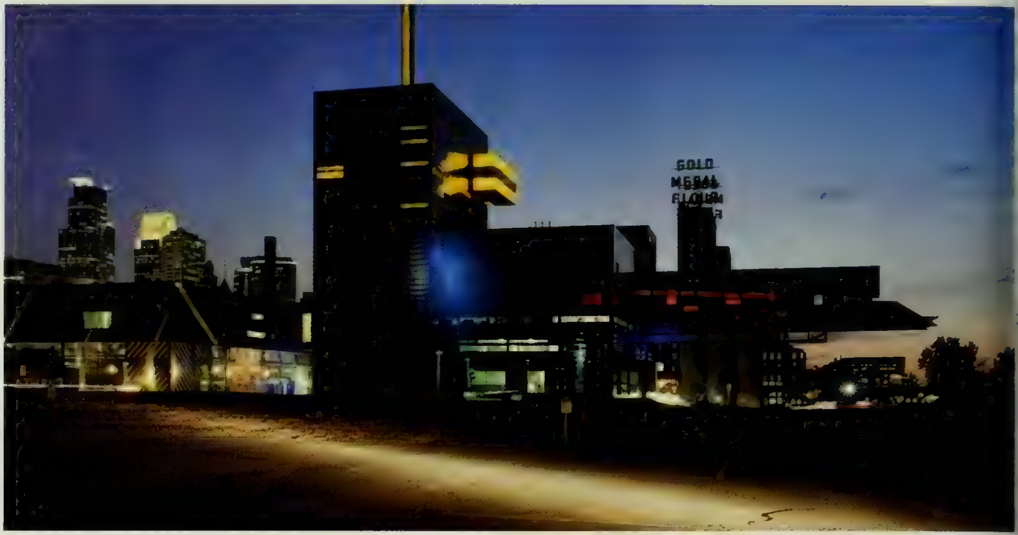
PHOTOGRAPHY: © ROLAND HALBE

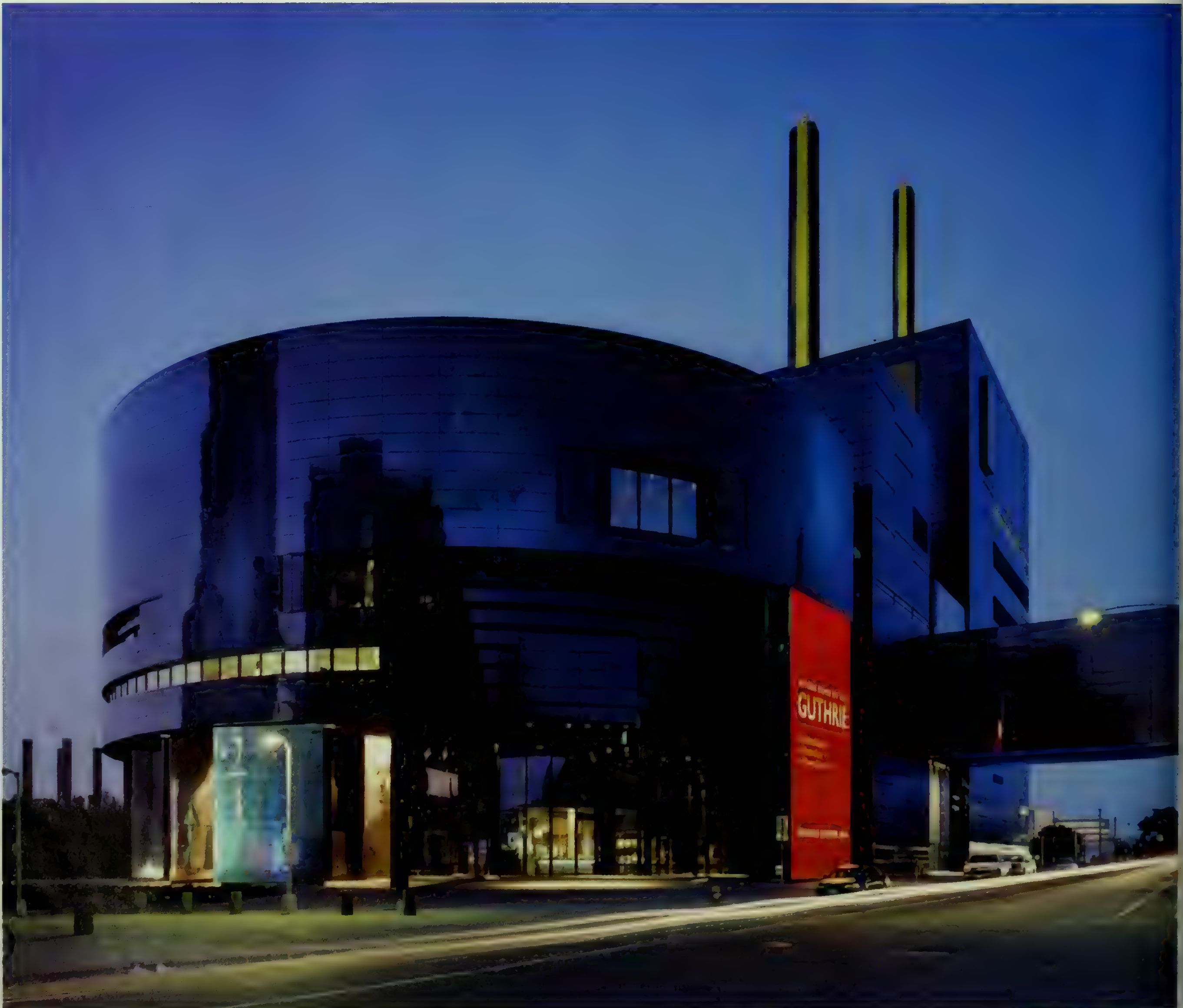
e Guthrie's industrial
age draws from
eserved mill buildings
pposite). The "endless
idge" brings Guthrie
trons to the edge of
e river. Nouvel layers
aywright's faces on
lboards (below) and
age scenes on the
e panels (right).
tors' images appear
rooftop zipper signs.





The zipper signs, visible from afar (right), evoke smokestacks, a sly reference to the "industry" of culture. The apsidal form (below) conforms to the shape of the thrust hall within. Patrons enter under a bridge that connects to set shops before proceeding to the lobby, located on the fourth floor.





emier regional theaters, but "a tional center for theater arts and eater education."

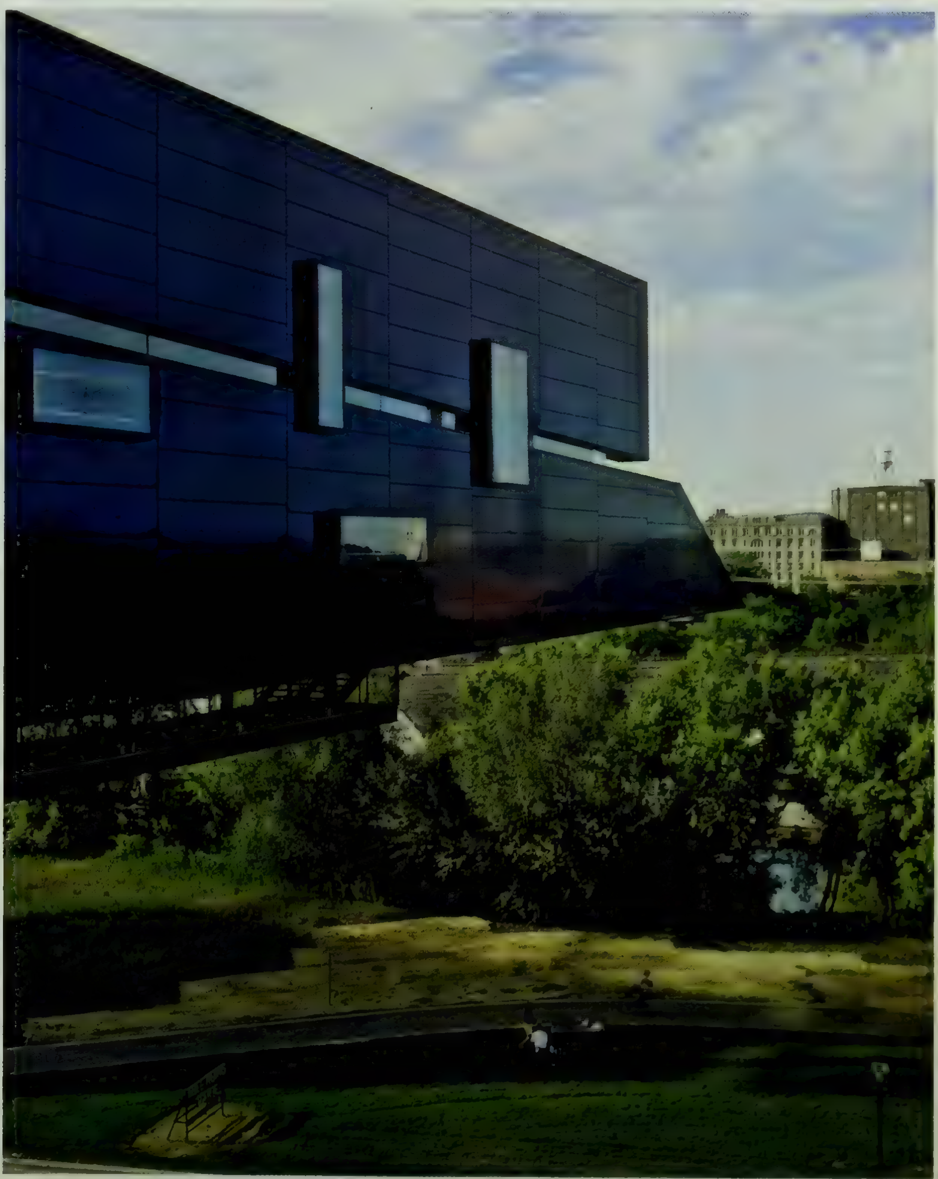
lution

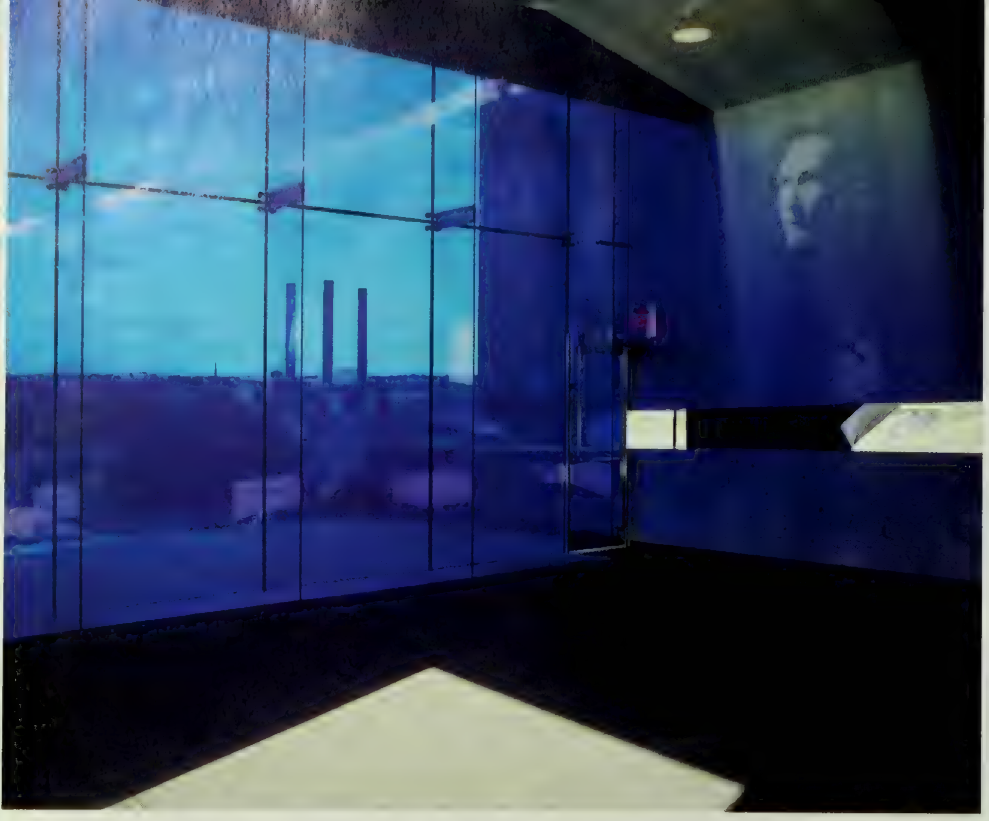
ris-based Ateliers Jean Nouvel was ected for its first American build- ; largely because Dowling was oressed by Nouvel's well-regarded ncert hall in Lucerne, Switzerland, d an opera house in Lyons, France. ough the theater had obtained a 0-foot-long site, Nouvel shocked wling by proposing to mound up 285,000-square-foot building a 10-story height at the site's stern end. (The unused land will come a park.) The building's form udes a barely contained energy, an early-20th-century factory by Mendelsohn. Scudding across shimmering facade, by contrast, what seem at first reflections. ey coalesce into ghostly images een-printed onto the surface: enes from *Hamlet* or *Of Mice and n*. The haunting images evoke the thrie's distinguished history and ure ambitions: The building's ustrial forms extend a 12-story- h skyline formed by an adjacent in silo and flour mills—monumen- relics of the city's past that have en adapted as condominiums, the l City Museum [RECORD, February 04, page 122], and a park of ustrial archaeology.

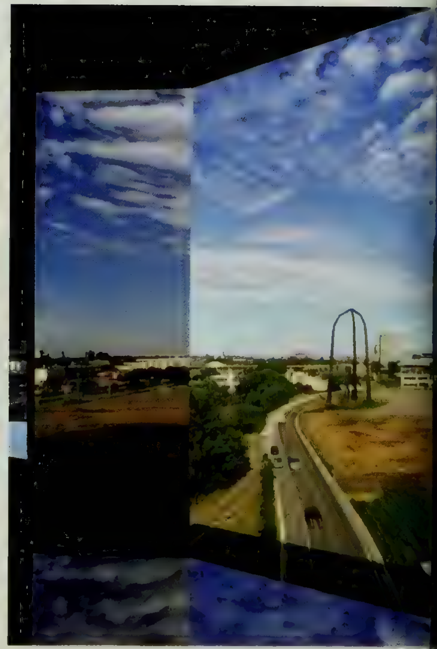
Nouvel added bold color: the ep blue aluminum panels, in con- st to the butter-tinted, lanternlike ck that clings improbably to the building (the studio-theater by). He layers the images and ors atop the assertive architec- al formmaking—not attempting reconcile them to each other.

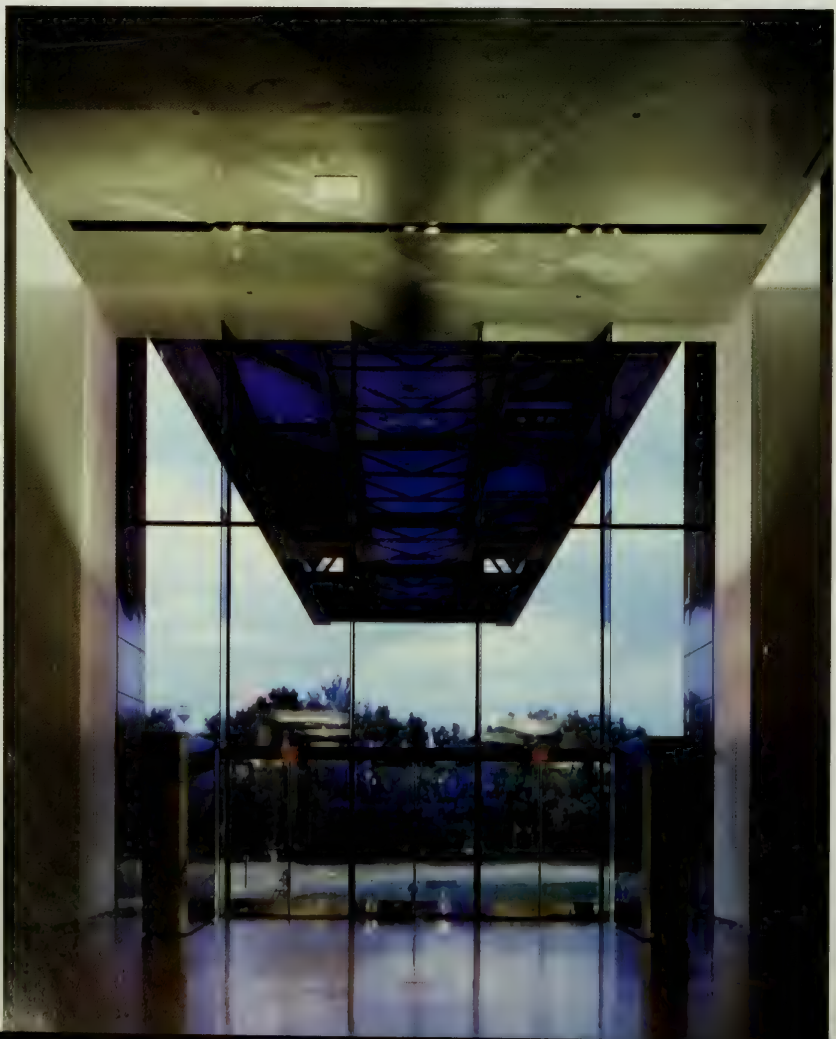
Nouvel proposed his most vura gesture, the cantilevered by bridge, "to touch the ssissippi River." It links the most hitecturally introverted of art forms a panorama of the Mississippi and city beyond. Because it is ele- ed, the bridge/lobby inevitably uired that the two main-stage eaters it serves be located 50 feet ove the street. The idea "raised ebrows," dryly observed Thomas Angelo, FAIA, principal with

The endless bridge hangs over the river-banks (below) offering a sublime panorama of the city and the vast midwestern horizon. In good weather, the bridge opens to a tiny terrace (right).



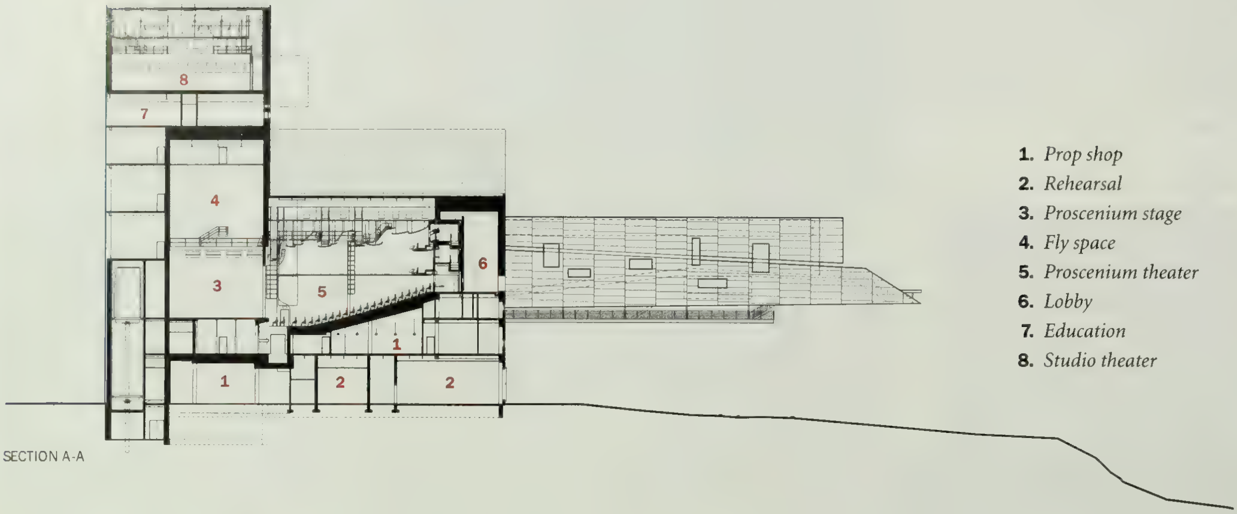






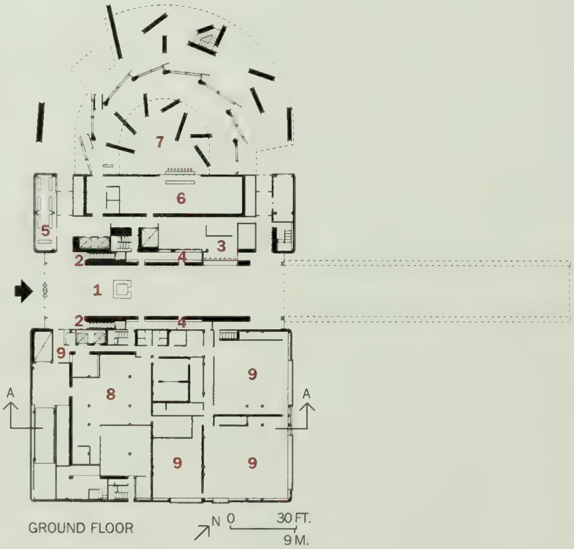
Images from past productions scud across walls and ceilings of the ground-floor lobby (left). The upper lobby bridge teases the senses with windows lined in reflective metal that fragment the view (top right). The bridge ends in a plane of blue glass (top left) that Nouvel says "lures you through" to a tiny set of outdoor steps (prior page, top photo).

om the fourth-level bby (below, with blue ass opening to iostly views of the :t-shop bridge), a vitchback ramp in the ıdless bridge rises to e fifth-level lobby ght, with blue-glass ıening to an urban ınorama). Glowing :micircular openings ık bars and a restaunt on the two levels.



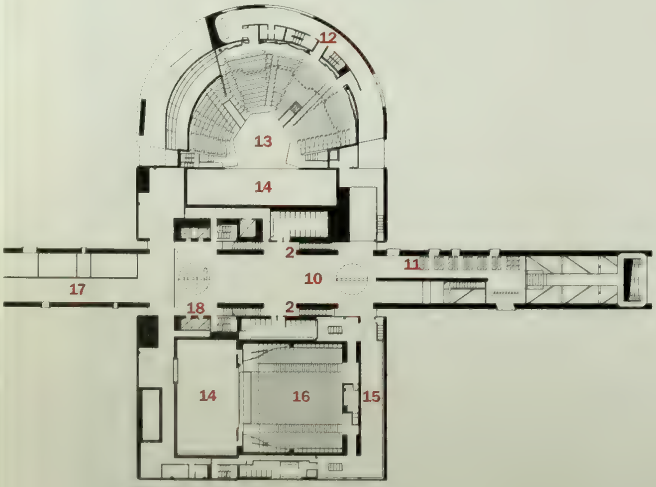
SECTION A-A

1. *Prop shop*
2. *Rehearsal*
3. *Proscenium stage*
4. *Fly space*
5. *Proscenium theater*
6. *Lobby*
7. *Education*
8. *Studio theater*

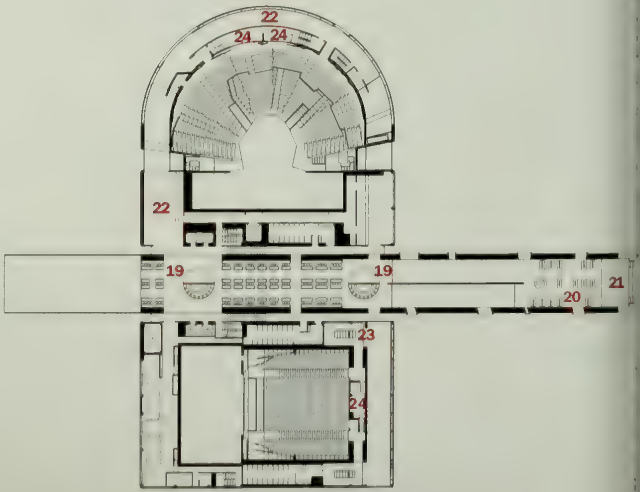


GROUND FLOOR

1. *Ground-floor lobby*
2. *Escalators*
3. *Ticketing*
4. *Coats*
5. *Shop*
6. *Kitchen*
7. *Restaurant*
8. *Props*
9. *Rehearsal*
10. *Theater lobby*
11. *"Endless bridge"*
12. *Thrust lobby*
13. *Thrust auditorium*
14. *Stage*
15. *Proscenium lobby*
16. *Proscenium auditorium*
17. *Link to set shops*
18. *Elevator to studio theater*
19. *Restaurant*
20. *Bar*
21. *Terrace*
22. *Upper lobby*
23. *Balcony access*
24. *Control booth*



FOURTH FLOOR



FIFTH FLOOR

chitectural Alliance, the project's
chitect of record. "You not only have
get sets and equipment up and
wn, but you have to get people up
d down, both for performances and
emergency exiting."

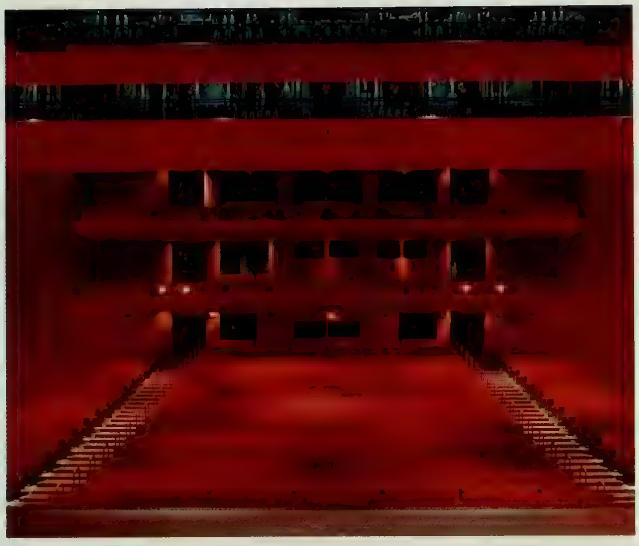
The Guthrie endorsed the the-
er-in-the-air idea, especially once
e design team moved the scene
ops to a parking structure across
e street. They connect at stage
vel through an enclosed bridge.
roduction and rehearsal spaces fill
e levels below the main stages.)

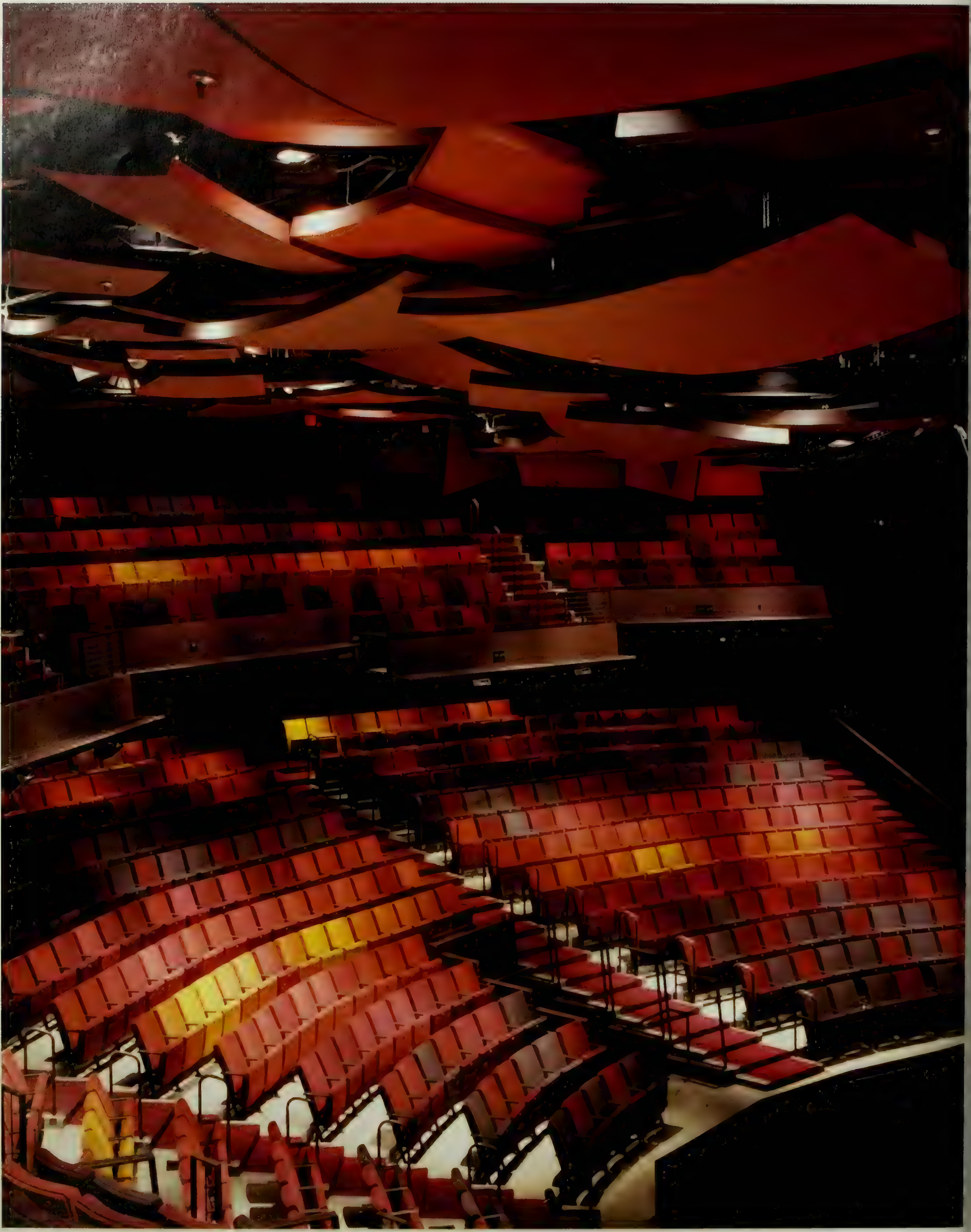
By framing the building in steel,
ge trusses could span the audito-
ms as well as suspend ceilings
d technical catwalks. Each audi-
ium is structurally separated for
und isolation. The outer surfaces
the endless bridge frame a three-
nensional steel truss that
unterbalances the bridge's weight
extending the full depth of the
ilding. Braced columns anchor
e truss to bell-shaped concrete
issons poured into solid rock.

Nouvel favors interiors cast
o nightclub gloom, but he orches-
ites contrasts of shadow, light,
d color with all the skill of a
ige-production designer. The tall
ound-floor ticketing lobby—in
iss and austere grays—leads up
eatrically lit, shaftlike escalators
the fourth-level lobby that opens
to the endless bridge. Nouvel
veils its views kaleidoscopically
ough long slit windows and big
uare openings. One window
ens, admitting breezes and the
ar of the Saint Anthony Falls. A
ine of blue glass at the bridge end
ts the panorama beyond like a
o-tone etching. Beyond, the floor
ine drops away as a miniature
epped, open-air amphitheater
at hangs high over the riverbanks.

These visual effects don't have
ything to do with the reason people
me to the Guthrie, but they have
architectural theatricality that
uvel has long explored, especially
the luscious surface of the Agbar
wer [RECORD, January 2006, page
]. These effects subtly act on the
nses, stimulating patrons for the
perience to come, augmented by
ore stage-scene images that float

The scalloped ceiling (below) and the narrow balconies that perch at the back of the cubic proscenium auditorium (right) were shaped to aid sight lines and acoustics. (Unlike many stages today, Guthrie productions are not amplified.)



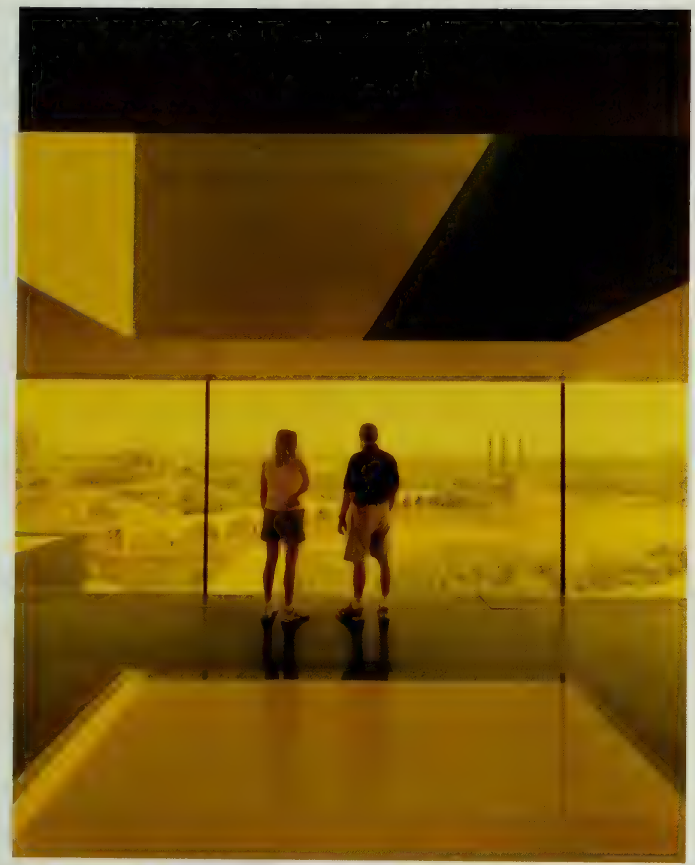


to view across walls and ceilings, hat Nouvel calls "the souls of a lot people from the beyond."

In the 700-seat McGuire prosce- um stage, Nouvel unleashes a more onventional theatricality by bathing e room in red light, including the ils of shining metal mesh that line e walls. The straight rows of seats rve Dowling's vision: "The great)th-century works of psychological alism, like those of Arthur Miller or igene O'Neill, demand to be seen everyone in the theater in exactly e same way," he explained, "as if no her audience members were pres- it." The design team has essentially plicated the old Guthrie's famous rust stage in the new Wurtele ieater while subtly altering it to iprove acoustics and technical xibility. At 1,100 seats, it holds 198 wer patrons than its predecessor, concession to comfort and sight es. Atop eighth-floor classrooms, ouvel has mounted the 200-seat owling Studio Theater. Its lantern- e lobby, sheathed in yellow-tinted ass, feels like a jaw-dropping but rtigo-inducing aerie. A wide, ward-folding door can unite the udio with its lobby, which, criss- ossed by beams of yellow-tinted ht, puts one in mind of Caravaggio.

ommentary

first viewing, the willful idiosyn- acy of this design shocks. Is the avura bridge sublime or a tourist- ochure stunt? The evocative use images and the theatrical effects lighting, color, and surface seem awn from some separate concep- n. This building is utterly intuitive ouvel says he chose the red to atch the infrared color he saw in computer mouse, for example). It neither tidily conceptualized nor stematic. Its variety of effects ay take some getting used to, it it will likely win over audiences cause Nouvel understands—in heart, perhaps, rather than in his ad—the nature of theatergoing. e architecture does help people ter the world conjured by actors: e of dreams, hopes, and memo- s, in which each evening is ique and evanescent. ■



The colors and configuration of the thrust theater (opposite) were largely replicated from the Guthrie's first home. A wide doorway links the studio theater (bottom) to a lobby bathed in light from tinted glass (left). Augmenting the floor-to-ceiling glazing is a skylight and glass floor.

Two: LUXEMBOURG PHILHARMONI

Luxembourg City, Luxembourg

Christian de Portzamparc animates a monumental plaza with a spatial dynamism that takes its sophisticated urbanism inside.

By Joseph Giovannini

Architect: *Christian de Portzamparc Studio—Christian de Portzamparc, François Barberot, Wilfrid Bellecour, Jean-Charles Chaulet, Urban Stirnberg, Pierre Van den Berg, Alexi Lorch, Céline Barda, Christophe Echapasse, Odile Pornin, Duccio Cardelli, Rémi Oliel, Constantin Dölher, Burkhardt Schiller, Frédéric Binet, Jean-Daniel Boyé, Mathieu Faliu*

Executive architect: *Christian Bauer & associés*

Client: *Grand Duchy of Luxembourg*

Engineers: *Gehl Jacoby & Associates, SETEC (structural); S&E Consult, SETEC (plumbing); Felgen & Associés (electrical)*

Consultants: *Xu-Acoustique (acoustics); L'Observatoire 1 (lighting)*

Size: *215,000 square feet*

Cost: *Withheld*

Completion date: *June 2005*

Sources

Metal panels: *Reynobond*

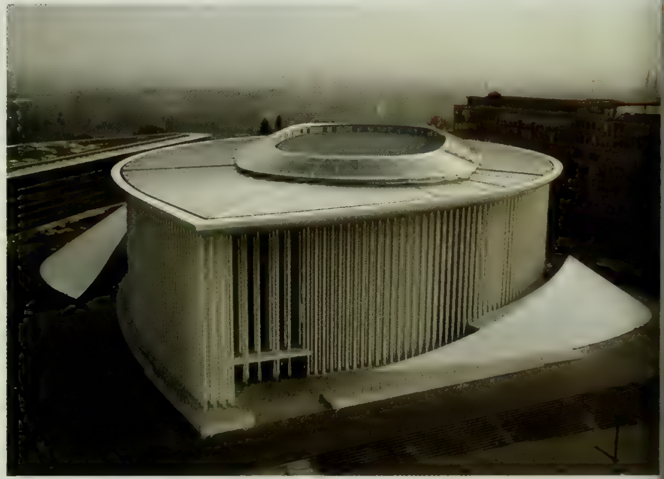
Auditorium acoustical reflectors: *Glass-reinforced gypsum*

Sound-absorbing wood panels: *Topakustik*

Furnishings: *Matteo Grassi; Arne Jakobsen*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

French architect Christian de Portzamparc won the competition for the the Luxembourg Philharmonie—officially, the Grande-Duchesse Josephine-Charlotte Concert Hall—by recognizing the monumentalism of the setting he was given while imbuing this concert hall with a spatial dynamism. As the capital of a founding member of the European Union, Luxembourg City has become host to many of its institutions, including the European Court of Justice. Over the past 20 years, a modern bureaucratic acropolis has risen on the Kirchberg Plateau, across the valley from the old, walled city. With political and economic success, however, the country has turned to developing a cultural infrastructure commensurate with its new status.



Program

A 1997 competition sought an urban centerpiece for the triangular Place de l'Europe, bounded by monumental glass governmental structures. The brief called for a 1,500-seat concert auditorium, a 300-seat chamber-music hall, and a black-box theater seating 120. Along with acoustic excellence for concerts ranging from symphonic music to amplified jazz, the tacit expectation was that the structure rise to its ceremonial function as a crowning symbol of the new, sophisticated Luxembourg City. The concert hall also had to address the plateau's main thoroughfare and ceremonial boulevard, Avenue John F. Kennedy.

Solution

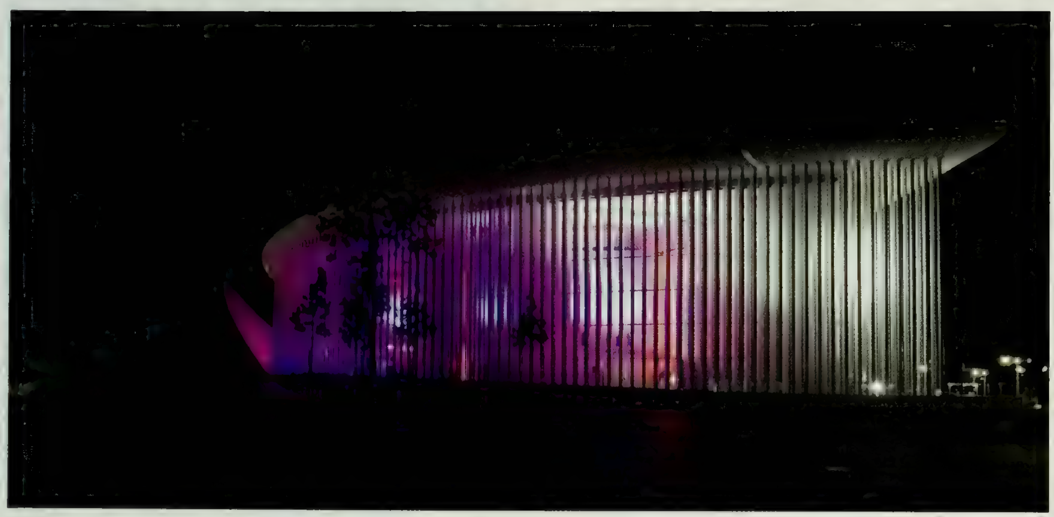
De Portzamparc conceived a densely colonnaded monument, elliptical in plan, with 823 tall, closely spaced steel columns at the perimeter supporting a thin, radius-edged roof. At the front prow of the ellipse, de Portzamparc widens the spacing between columns to accommodate the entrance that runs parallel to Avenue Kennedy. Two shells clad in metal panels rise on either side of the main structure. The tangential curve of one appears to launch visitors arriving from underground parking into the peristyle. The other arcs up as the cara pace of the chamber-music hall.

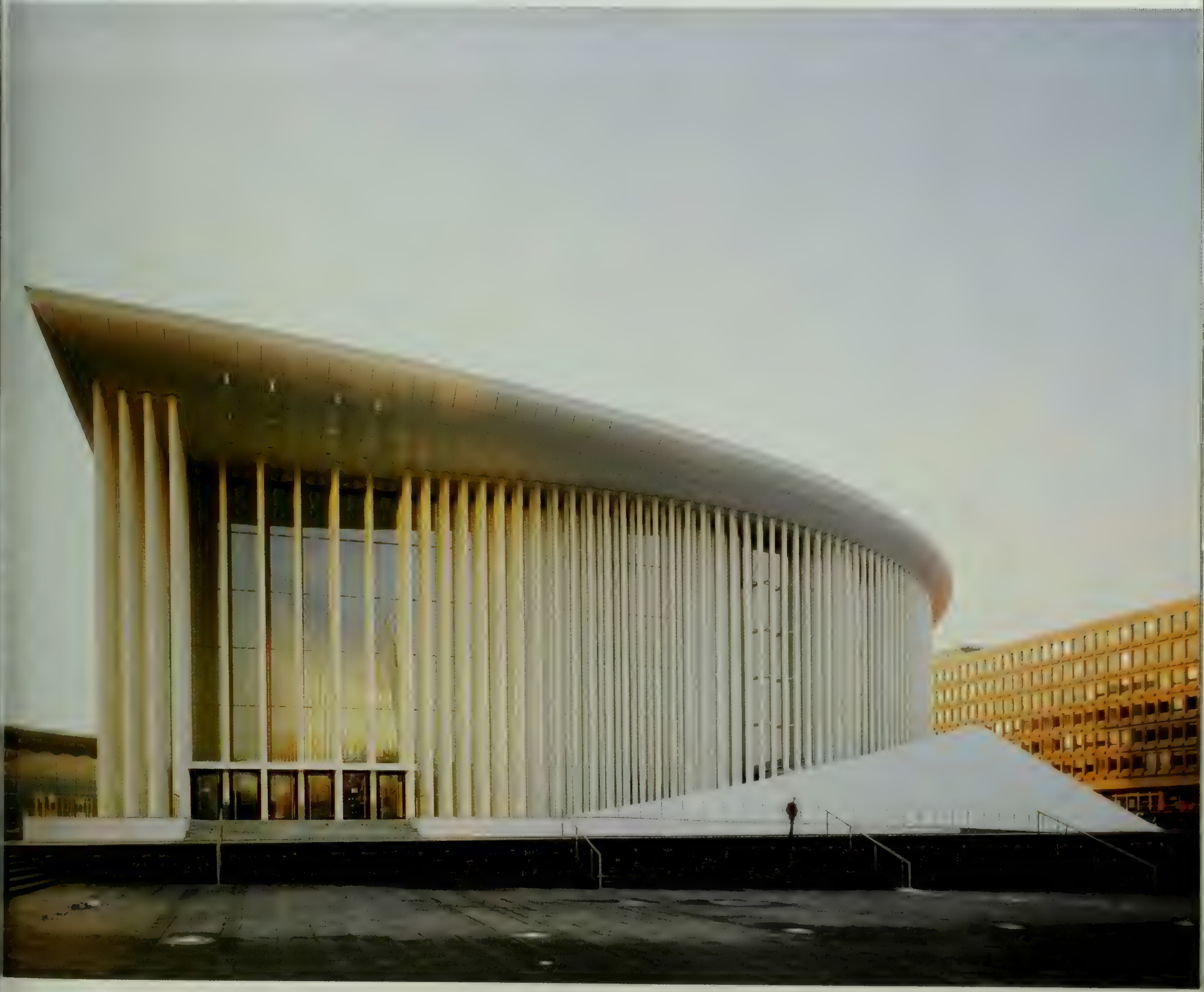
In ranges of three and four deep, the closely grouped columns fall in and out of alignment as audience members approach, like trees in a park, shifting the perception of the building between transparency and opacity. The first, interior layer c columns accommodates ventilation and electrical ducts; second-row columns act as structural mullions between windows; the outer layers support the roof.

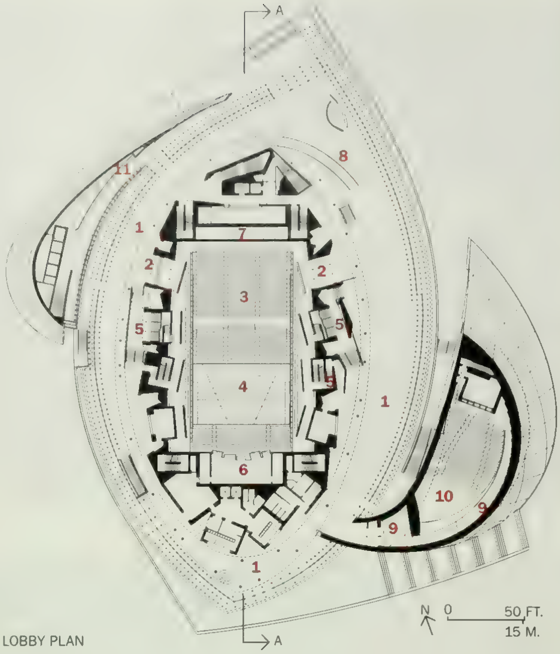
Inside, a soaring peristyle hall circles the main auditorium, which reads as a building within the buildin Tall, prismatic masses form the hall's "facade," reflecting the angula arrangement of seating towers withi The architect, working with acousti-cian Albert Yaying Xu of the Paris firm Xu-Acoustique, configured the

Joseph Giovannini is a critic and principal of Giovannini Associates based in Los Angeles and New York City.

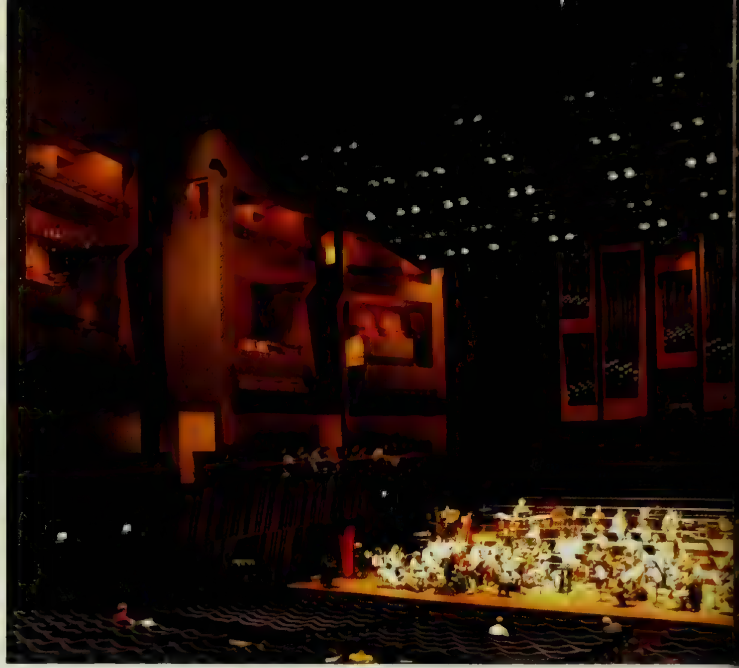
night, digitally
ixed colors turn the
liptical temple of the
ilharmonie, set on
triangular plaza
pposite), into a chro-
atic lantern (right). The
aza arcs up to roof a
amber-music hall. The
yers of columns open
at the Avenue Kennedy
trance (below).

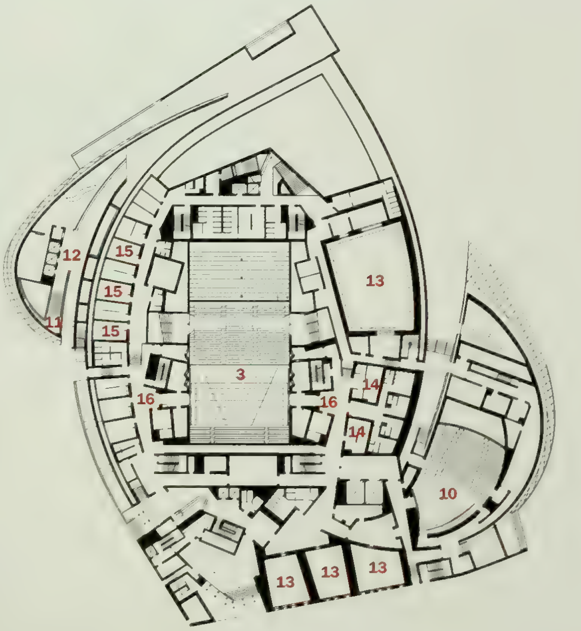




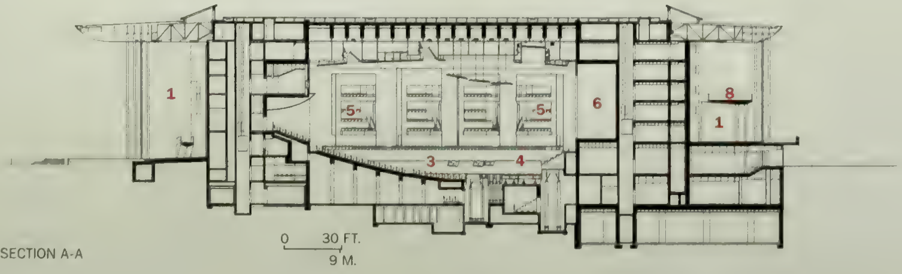


LOBBY PLAN





STAGE LEVEL

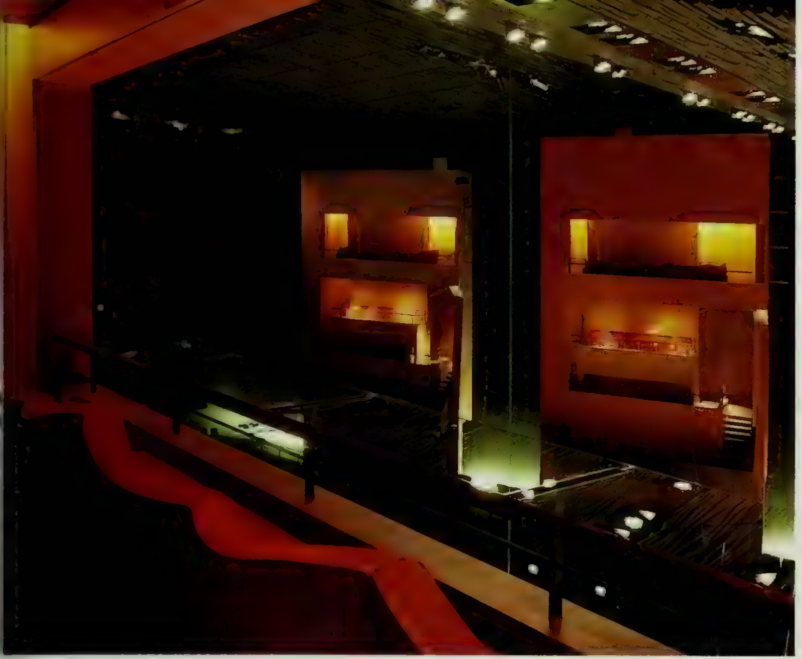


SECTION A-A

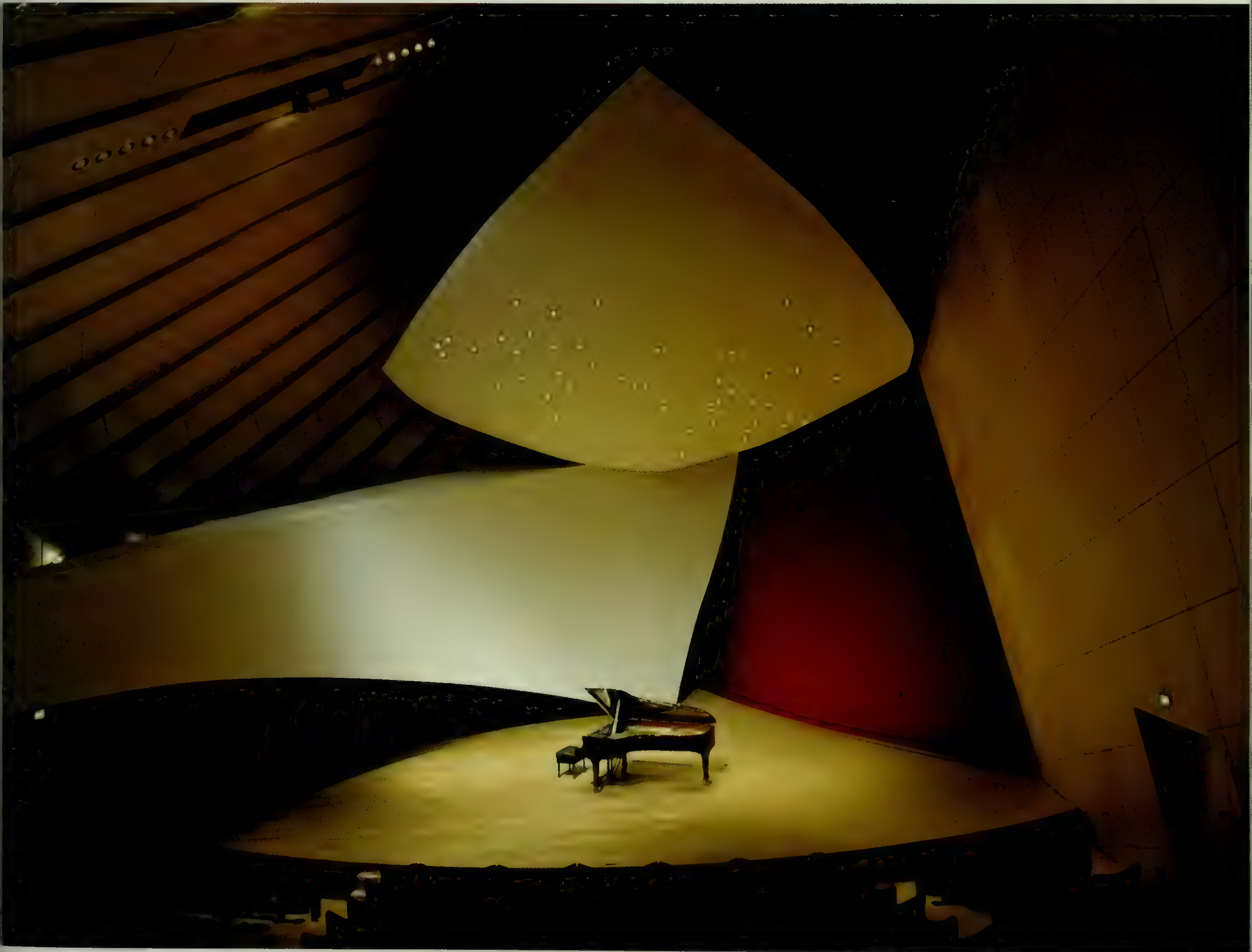
1. *Lobby*
2. *Access to orchestra*
3. *Auditorium*
4. *Stage*
5. *Seating towers*
6. *Organ*
7. *Mechanical*
8. *Ramp to seating towers*
9. *Ramp to chamber-music hall*
10. *Chamber-music hall*
11. *Access to parking*
12. *Ticketing*
13. *Rehearsal (below)*
14. *Soloist dressing*
15. *Dressing*
16. *Stage door*

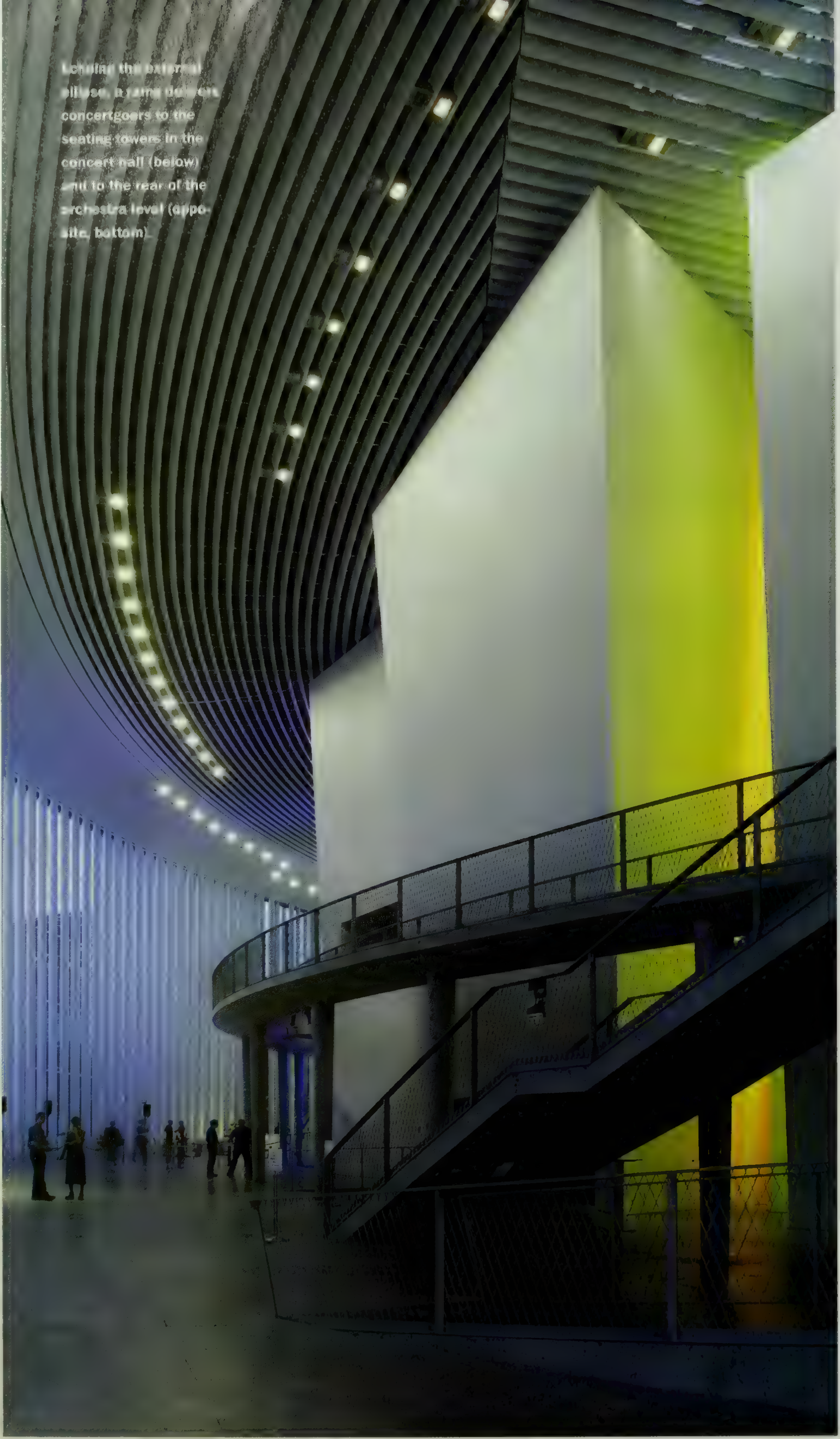
main auditorium as the tried-and-true shoe box (think Boston's Symphony Hall). Above orchestra seats fitted into this rectangle, eight freestanding, four-level seating towers rise, angled forward from the auditorium box and out of plane wit each other. Architecturally, the towers evoke town houses overlooking the orchestra-level's village square, creating an intimacy unusual in shoe-box halls, because the perform ers feel wrapped by the audience.

While the shoe box creates reverberant sound throughout the hall, the shaping of the seating towers diffuses a wide spectrum of sound, especially at low frequencies just as the heavy decoration of olde halls does. Much of the sound listeners receive is reflected from a surface, as in most halls. Because sound tends to arc upward from musical instruments, the highest seats, which are close to the stage, receive sound directly from the players. Stairs within each tower give internal access to its 28 seats. Special curtains increase sound absorption for amplified music, whil three sound reflectors hovering ove the stage can move to aid sound distribution for a piano recital. Xu has achieved a reverberation time that varies from 2.0 seconds for orchestral music to 1.6 seconds fo amplified jazz or pop.



Within the main auditorium's shoe-box envelope, seating towers aid sound diffusion while creating a kind of "village square" in which viewers wrap the orchestra stage (left and opposite). Listeners enter the chamber-music hall (bottom) along a ramp behind the long elliptical form visible behind the stage. The leaflike panel overhead diffuses sound.





Echoing the external ellipse, a ramp delivers concertgoers to the seating towers in the concert hall (below) and to the rear of the orchestra level (opposite, bottom).

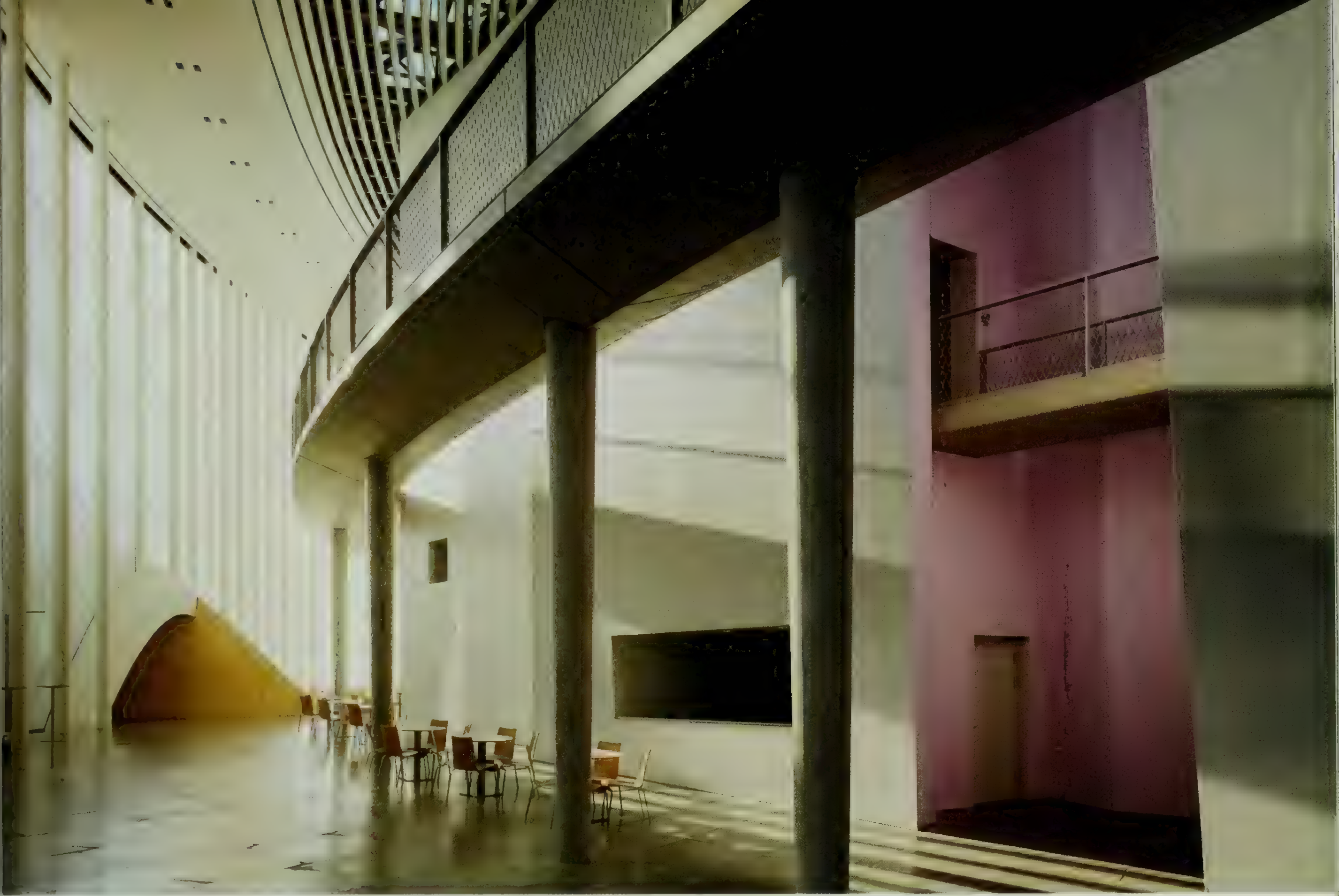
A curved corridor leads patrons from the peristyle hall into the chamber-music auditorium, where a roof shell gracefully vaults over an asymmetrical auditorium curved in plan. The shape works because the placement of chamber instruments (and the way they emit sound) tends to asymmetry, according to Xu. De Portzamparc tucked the black-box theater under the auditorium, accessing it from behind the hall with a zigzag of stairs.

Commentary

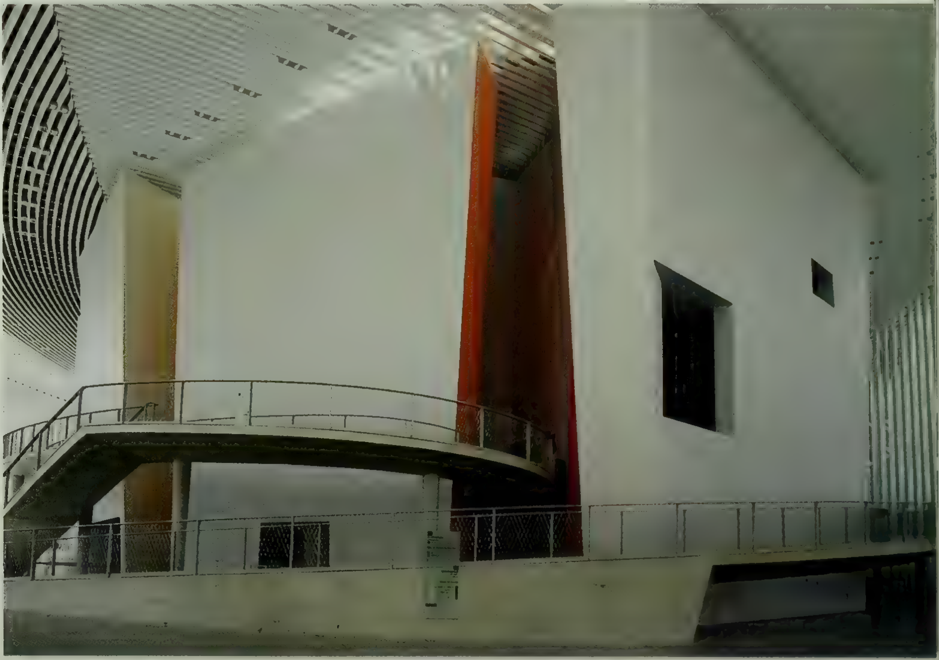
The colonnaded monument stands autonomously in the square, very much the modern abstraction of a temple. But the relationship of the building to the plaza is not purely one of figure to ground, because the "ground" itself heaves topographically in the organically shaped chamber-music hall and parking entrance. De Portzamparc has kept a clarity by separating the three halls and the parking entrance, while conferring a Platonic purity on the parts.

The architect creates a visual tension by juxtaposing the formality of the lobby colonnade against the chaotic vitality of the fragmented auditorium facade. Beyond their acoustical function, the haphazardly angled towers humanize the hall itself through their "town square" urbanism while seeming both to dilate the box and break it open. Xu has won appreciative comments on the sound from prominent conductors.

Its classicized elements notwithstanding, de Portzamparc's monument is defined by light rather than mass. The rounded elevations, curving in relationship to other curves, and the shifting parallax that makes the structure seem alternately solid and porous, add a dynamism to the static temple form. Visitors come to understand the building by experiencing it. The chromatic plays of light confer another layer of movement and transformation. Johann Wolfgang von Goethe said that architecture is frozen music, but de Portzamparc has defrosted the architecture so that, like music, it can be experienced in the fourth dimension of time. ■



The tower seating within is echoed in the hall's exterior, crossed by passages leading to the seats (top). De Portzamparc illuminates the deep crevasses with lights (below left), and silhouettes the facets into a Cubist composition of planes (below right).



Three: HOLLAND PREFORMING ARTS

Omaha, Nebraska

HDR and Polshek Partnership collaborate to build a light-filled concert hall that invigorates a prominent downtown Omaha site.

By Russell Fortmeyer

Architect: *A collaboration between HDR and Polshek Partnership Architects*
Client: *Heritage Services and the Omaha Performing Arts Society*
Consultants: *HDR (m/e/p/structural); Kirkegaard and Associates (acoustical); Fisher Dachs Associates (theater); Brandston Partnership (lighting)*

Size: *175,000 square feet*
Cost: *$95 million, including an addition and renovation at the Orpheum Theater*
Completion date: *October 2005*

Sources
Exterior cladding: *VM Zinc; Berridge (metal panels), Revere (copper panels)*
Windows: *Wausau; Pittco*
Glazing: *Viracon; Okalux; Solera*
Doors: *Vistawall; Crane Revolving Doors*
Carpet: *Bloomburg; Shaw*
Polished plaster: *Armourcoat*
Lighting: *Kurt Versen; Lithonia; Peerless; Poulsen*
Chairs: *Irwin Seating*
Upholstery: *Knoll; De Ball*
Controls: *Johnson Controls*
Plumbing: *American Standard; Toto*

For more information on this project, go to Building Types Study at **www.archrecord.com**.

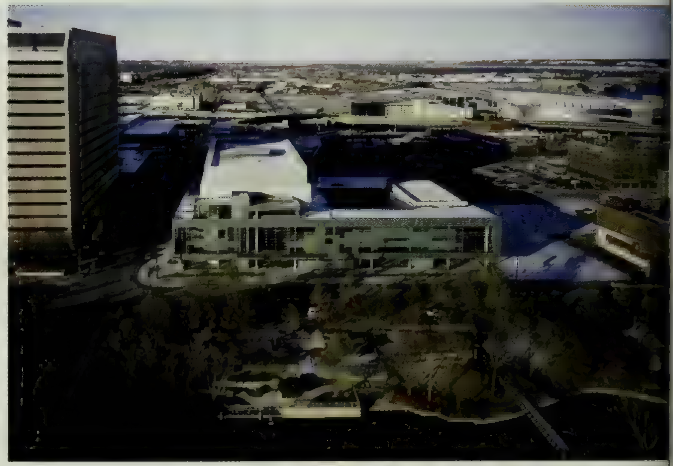
The first thing you notice about Omaha's new Holland Center for the Performing Arts is that you can see right through it. Walls of glass along the ground floor lobby help to enliven the Gene Leahy Mall, a flowing civic park across the street developed in part by Lawrence Halprin in the 1970s to renew the city and reconnect it with the river.

In a bid to drive downtown Omaha's continuing resettlement and to bolster a thriving fine arts scene, a former Swanson's foods plant was demolished to make way for the Holland, a $95 million home for the Omaha Symphony. Nearly 85 percent of that money came from private fund-raising, testament to the community's commitment to having the arts downtown.

Program

The symphony previously performed at Omaha's Orpheum Theater, a historic, 1920s-era proscenium stage it shared with the opera and Broadway-style touring companies. With its new home at the Holland, Nebraska's premier symphony has expanded its programming with more performances each year and the ability to offer jazz and pop music in a smaller recital hall with a more flexible seating arrangement.

The Holland's design was a collaboration between the architecture and engineering giant HDR, which is headquartered in Omaha, and New York–based Polshek Partnership Architects. "We felt strongly about the hall's relationship with the park," said HDR's Bruce Carpenter, AIA, adding that they also "wanted people to be drawn into the building."

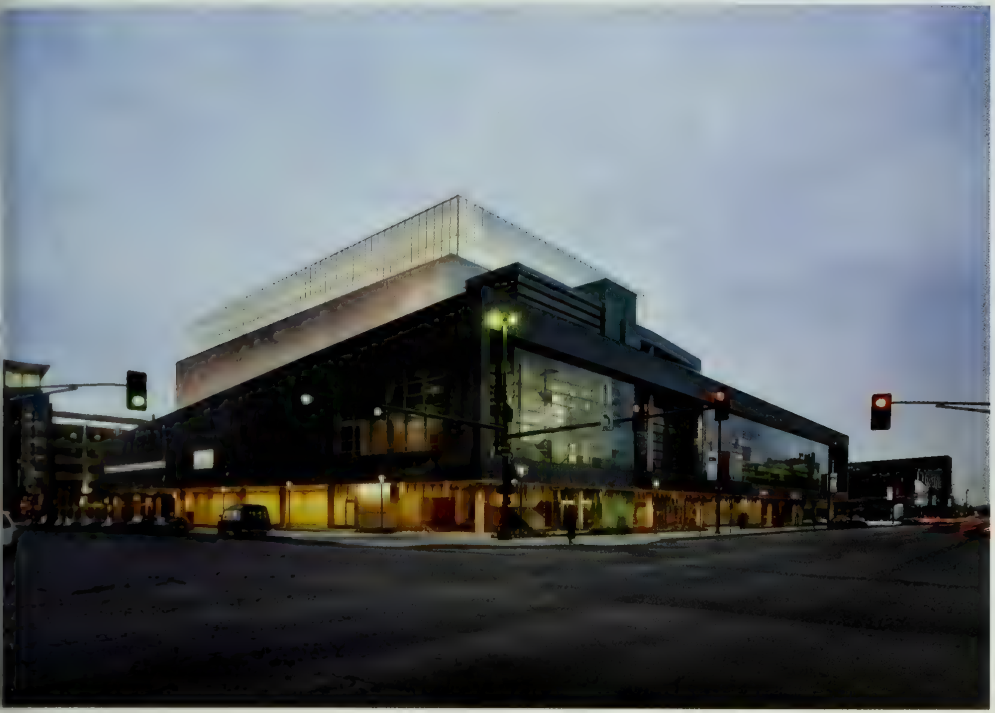


Solution

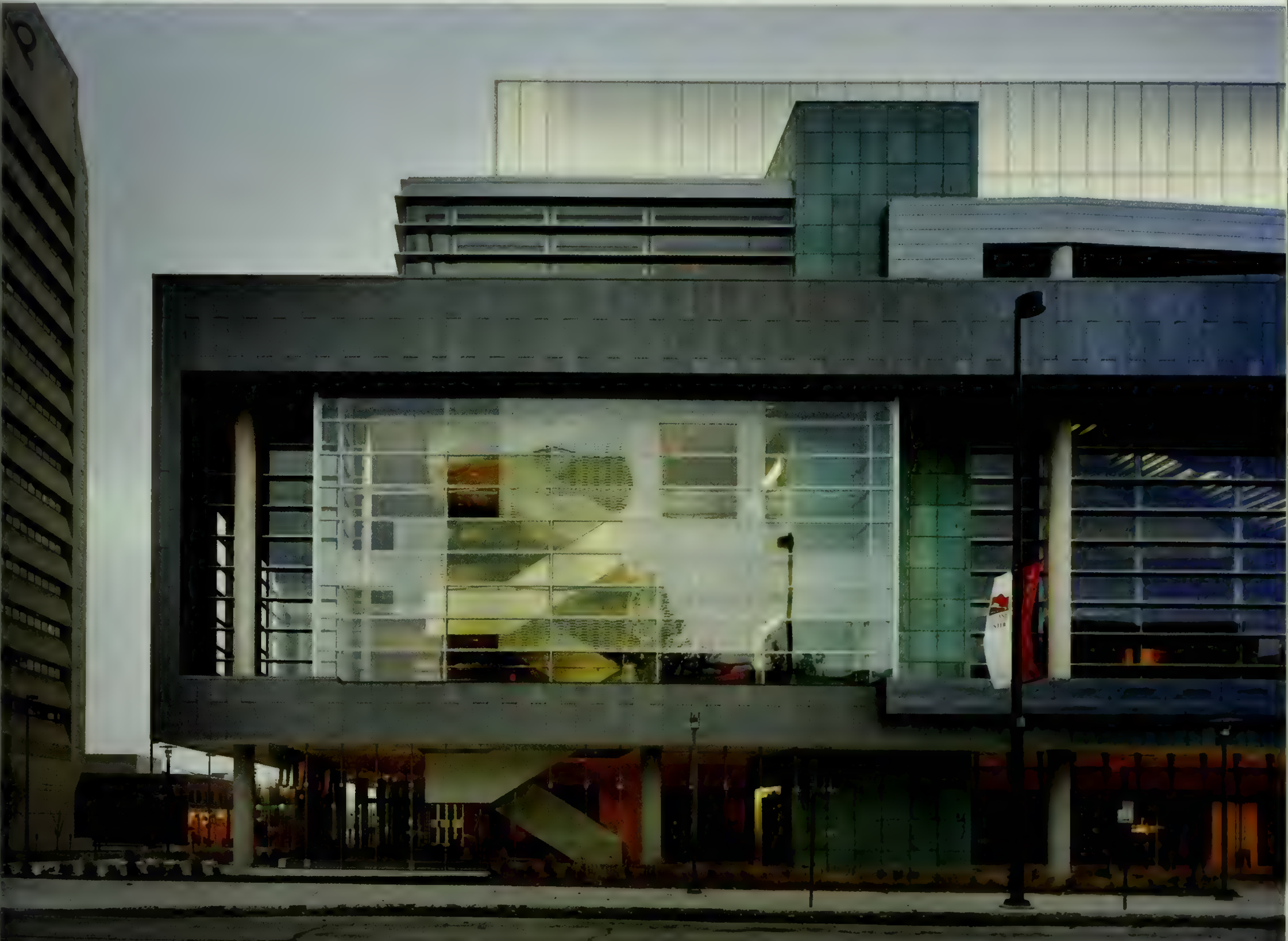
HDR and Polshek developed the concert and recital halls as discrete rectangular elements within a topography inspired by the rolling landscape of southeast Nebraska. The moss green Chinese granite lobby floors patterned with the site's topographical contour lines reinforce the landscape theme. The ground floor is enclosed in half-inch, highly transparent, low-iron glass panels to attract street life to the activity within. Aluminum track in the floor anchors the glass, while a fin system minimally supports it at the ceiling. Exterior materials include a zinc rain-screen system, a painted metal-panel system, prepatinated copper panels, and a 1.5-inch-thick French limestone cladding clipped to the concert hall's concrete structure.

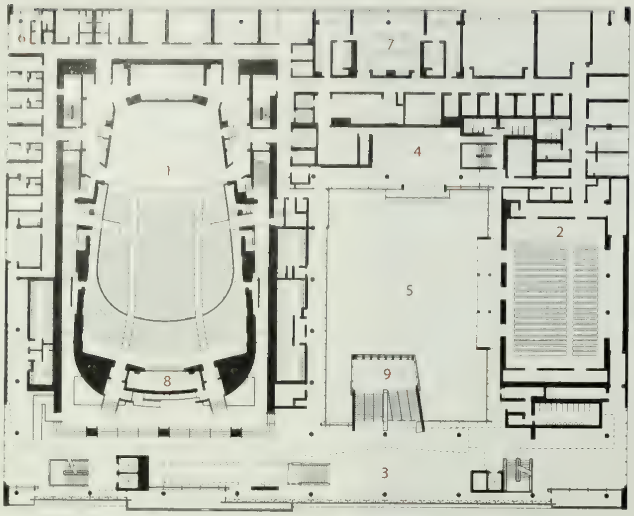
The architects created a "floating wedge" element, clad in zinc panels, which acts as the main design strategy for the hall's exterior presence and for the interior lobby and circulation. The wedge doubles as flexible pre- and postperformance space, with sweeping views of the city and street through an expanse o south-facing fritted glass attached to an aluminum structure.

Once in the light-filled interior, visitors find a clerestory reminiscent of Vienna's revered Musikverein, an intentional reference incorporated by the architects following a plan-

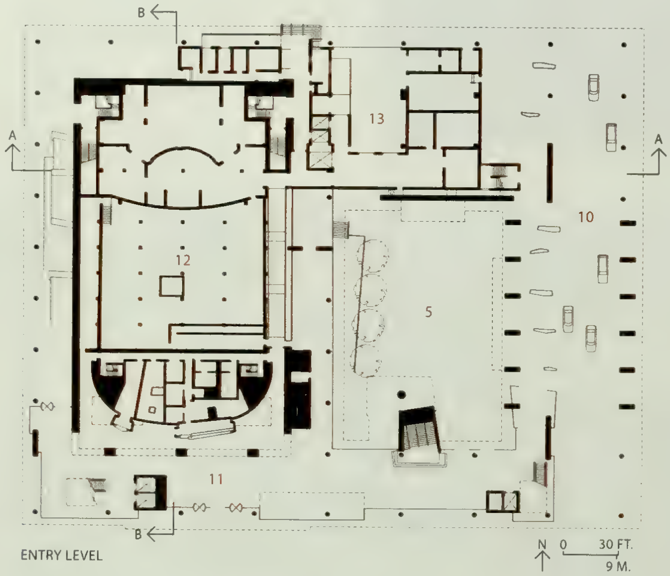


The second-floor lobby "floating wedge" is clad in zinc panels, while the box of the concert hall is limestone with a glass clerestory (left). The ground floor's glass curtain wall, supported by thin fins, creates a "see-through" effect for the Holland's public spaces.





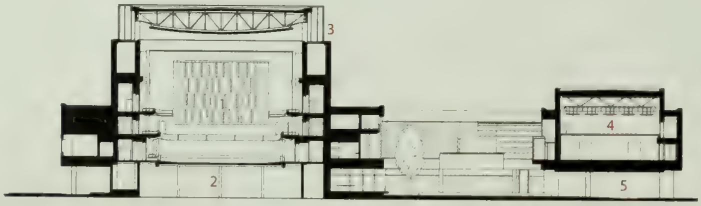
ORCHESTRA LEVEL



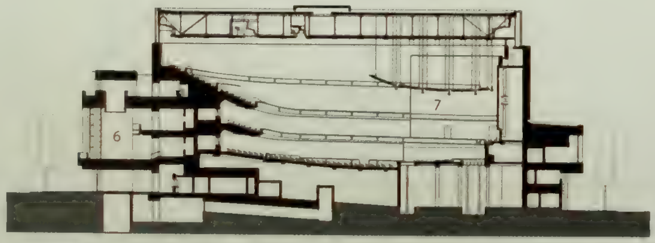
ENTRY LEVEL

1. *Concert hall*
2. *Recital hall*
3. *Second-floor lobby*
4. *Founder's room*
5. *Exterior courtyard*
6. *Conductor's suite*
7. *Instrument storage*
8. *Projection booth*
9. *Grand lobby stair*
10. *Driveway*
11. *Ground-floor lobby*
12. *Mechanical plenum*
13. *Loading dock*

A grand stair connecting the ground floor's entrance lobby with the second-floor lobby (opposite, top left) includes a landing overlooking the exterior courtyard (opposite, top right). A second main stair, constructed of translucent glass treads, connects all lobby floors (below). Bridges take the audience from the lobby spaces into the concert hall on the second and third floors (below right).

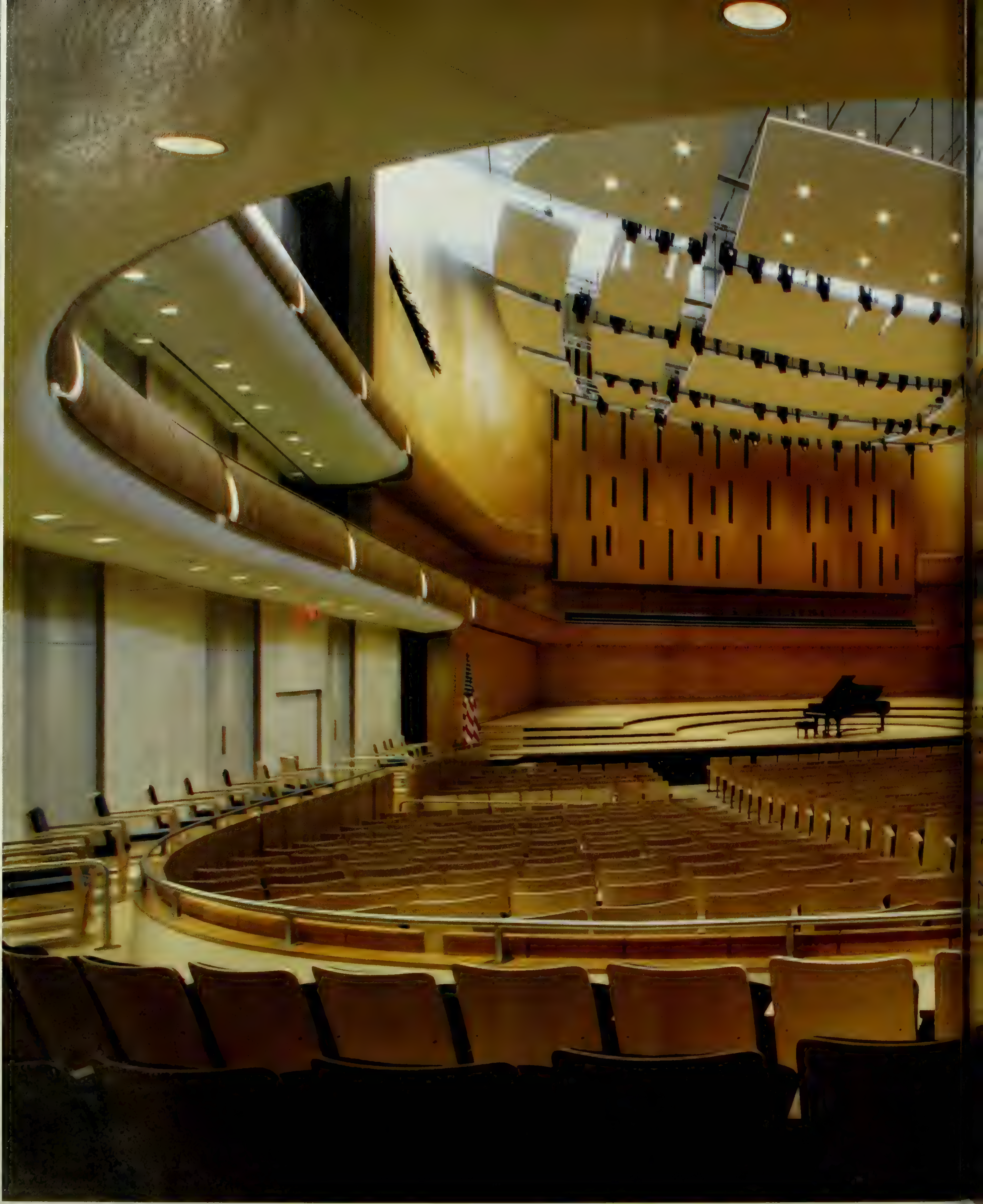


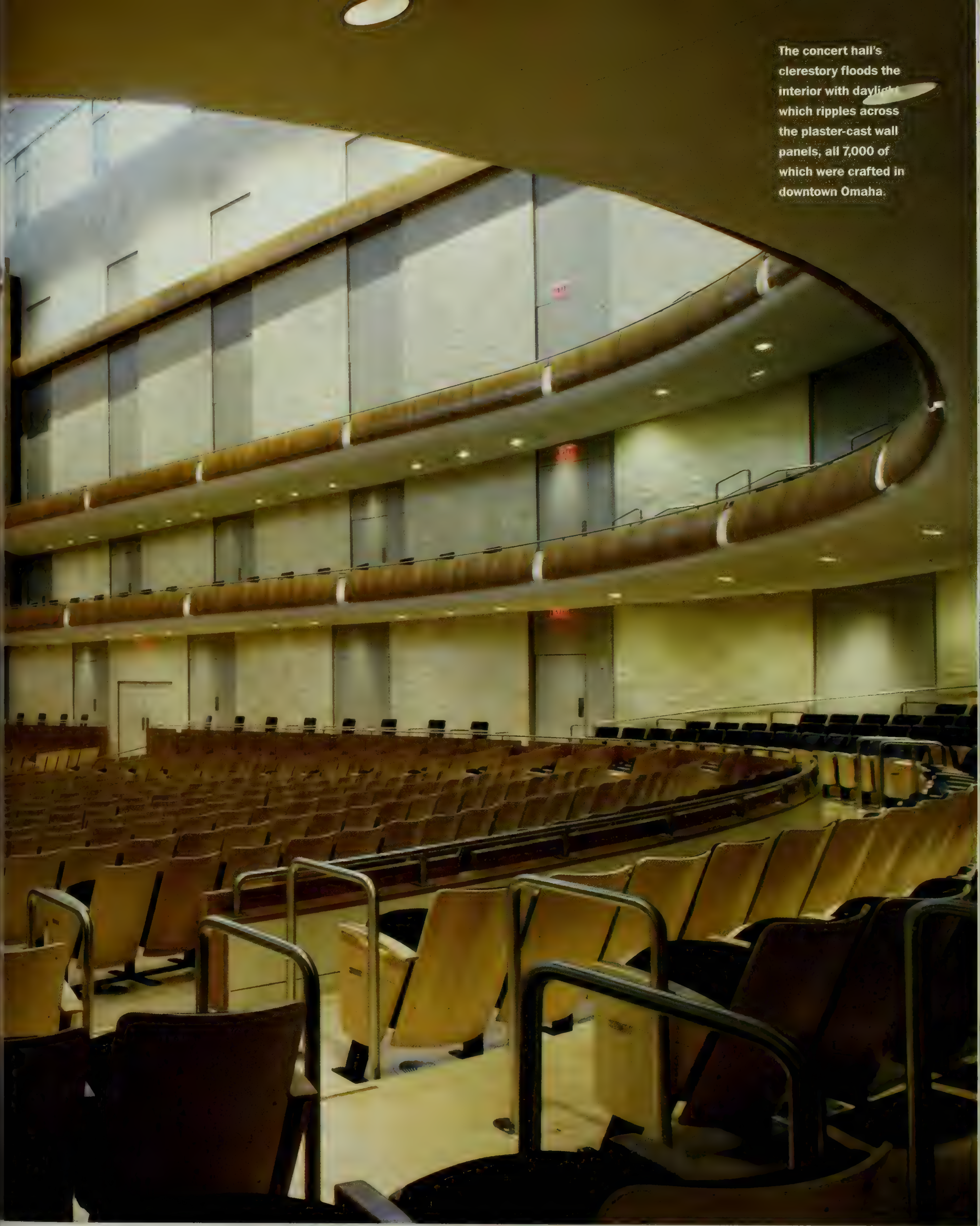
SECTION A-A



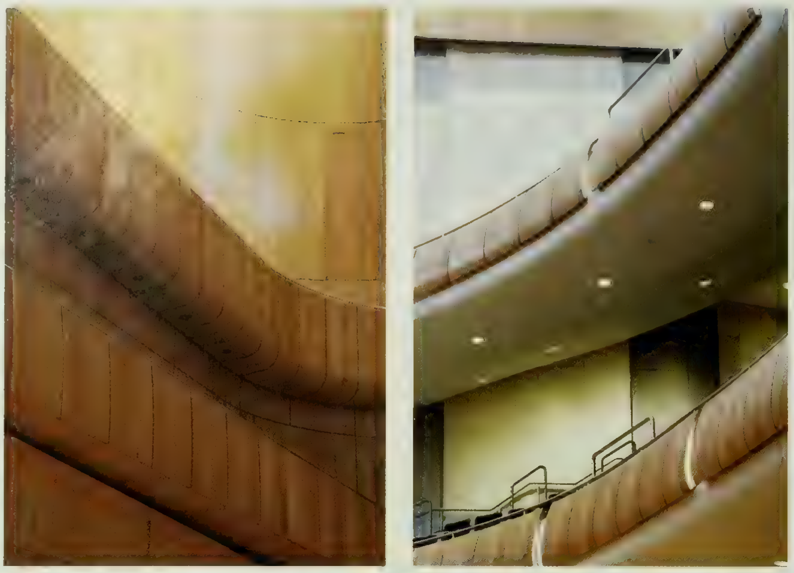
SECTION B-B

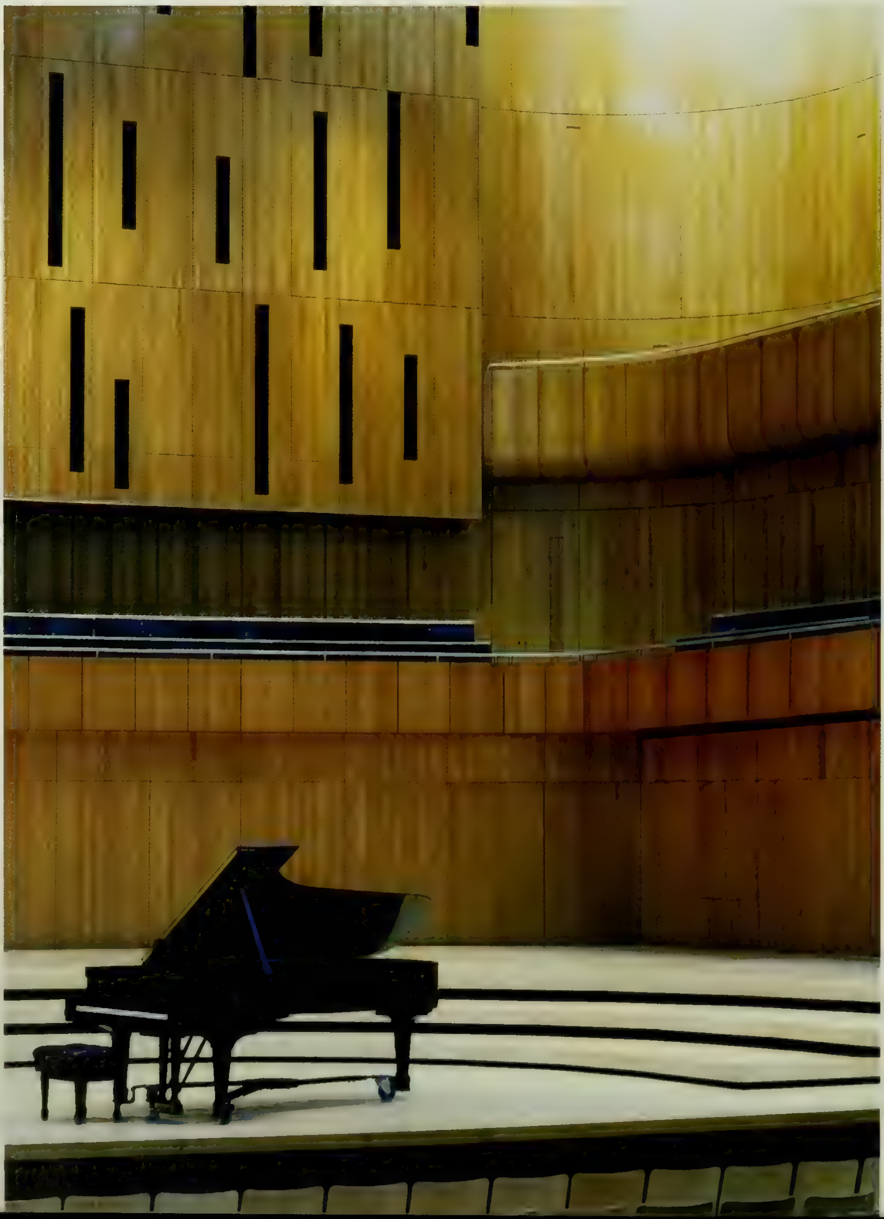
1. *Concert hall*
2. *Mechanical plenum*
3. *Clerestory*
4. *Recital hall*
5. *Driveway*
6. *Lobby*
7. *Orchestra canopy*





The concert hall's clerestory floods the interior with daylight, which ripples across the plaster-cast wall panels, all 7,000 of which were crafted in downtown Omaha.





American sycamore wood panels are used sparingly across the balconies (far left), but envelop the orchestral stage (left). A slot pattern introduced around the stage will eventually provide sound openings for a planned organ (below left).

ning trip to visit European concert halls. Working with the Chicago-based acoustical consultant Kirkegaard and Associates, the architects shaped the hall as an ovoid modification of the classic shoe-box volume, with 738 seats on the orchestra level, 278 on a mezzanine, 576 in the balcony, and 88 loose chairs in side boxes. Dedicated solely to music, the hall could forgo the need for a theatrica proscenium, wings, or fly space.

An adjustable canopy over the stage reflects and diffuses soun Pulled high and coupled with fiberglass panels that drop out of the ceiling, technicians can effectively eliminate the canopy for amplified music performances. Precast-concrete ceiling panels boost bass frequencies and support catwalks. Cast-plaster panels, with varied patterns to bolster sound diffusion, wer glued to the hall's concrete shell.

Dawn Schuette, of Kirkegaard said the glass clerestory could have presented a number of acoustical issues, but creating an air gap between two glass walls inhibited outside noise pollution and permitted the interior glass to be configured for acoustical reflectance rather than driven by thermal performance.

Commentary

HDR and Polshek have given Omaha a concert hall worth visiting for its rich sound, excellent sight lines, and striking interior, emboldened by the perfectly deft handling of the clerestory and its seemingly floating concrete ceiling While the hall's programming direc tor notes visiting musicians praise the hall's acoustics, the true evidence is the vibrant, precise sound one hears in practically any seat in the house. The clerestory further embellishes the ethereal pleasure of listening to the music performed

If the relatively restrained exterior architecture of the Holland doesn't burst forth from its site by day, its clerestory becomes a giant glowing lantern for downtown Omah at night, fulfilling the architects' desir to create a new icon for the city. ■

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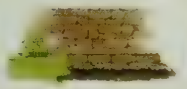

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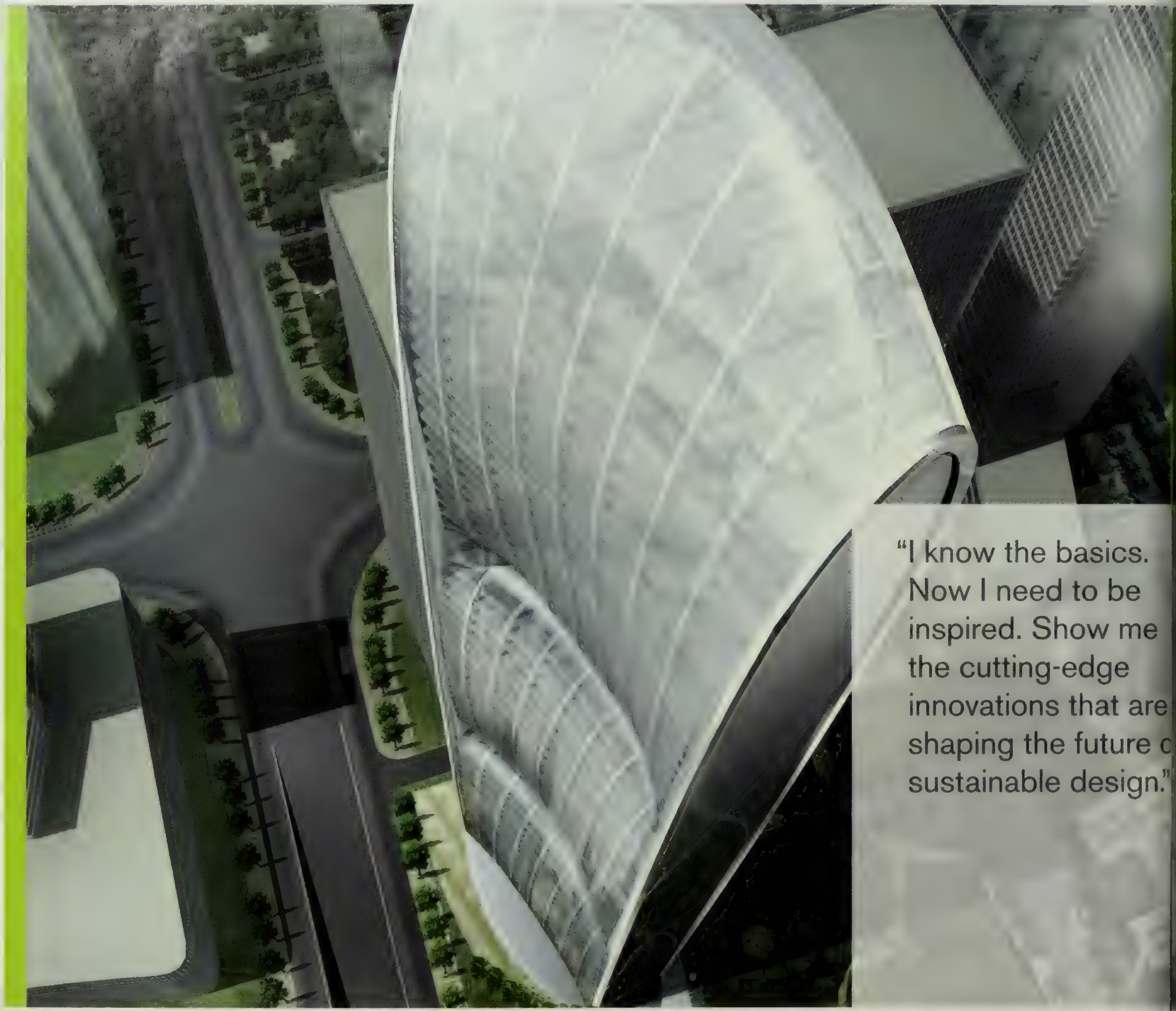

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Skidmore Owings and Merrill's Pearl River Tower (above and right) will be built in Guangzhou, China. It's designed to produce more energy than it consumes, and is just one of the case-study buildings that will be presented at the conference.

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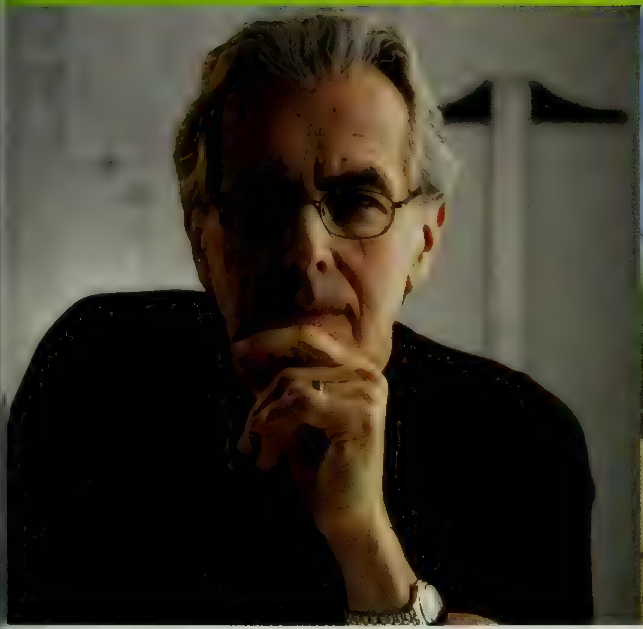

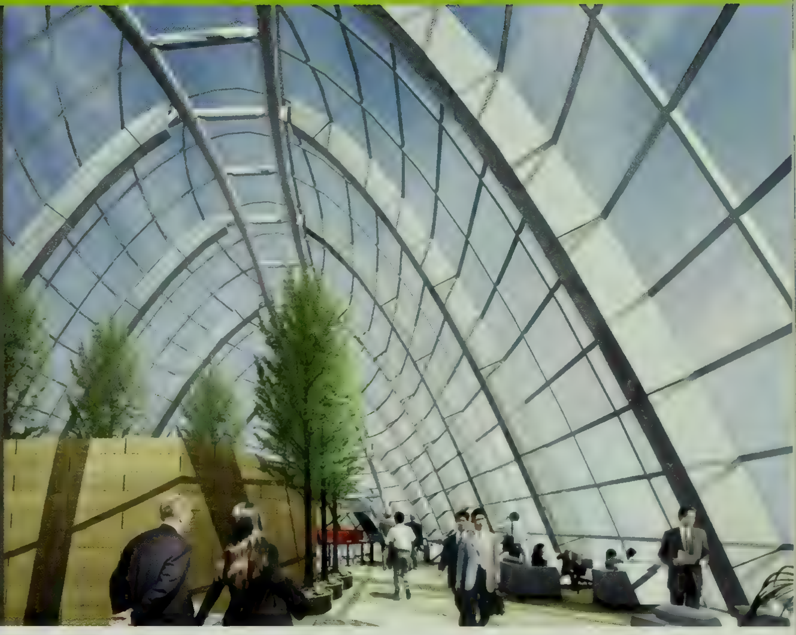

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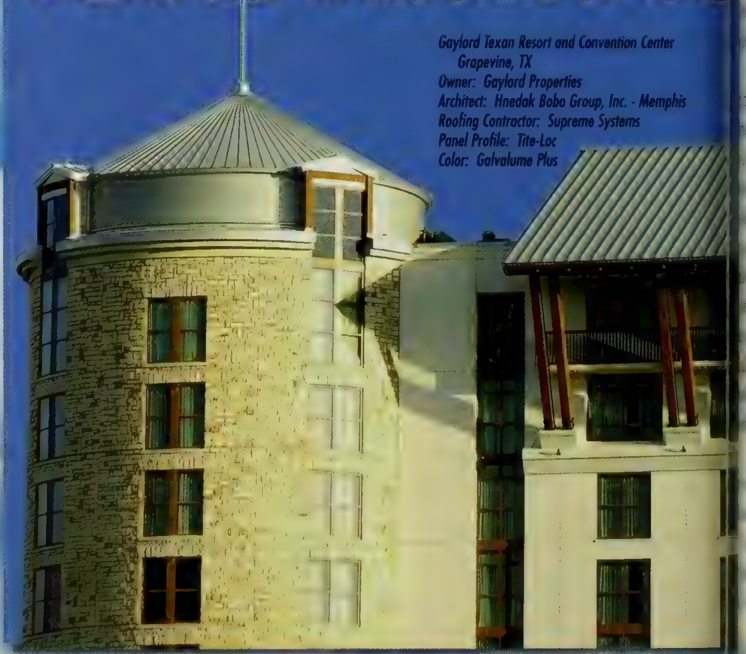
A Lone Star in the State of Texa



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Rooftops Slowly, but Steadily, Start to Sprout

ECHNOLOGY BEGINS TO TAKE ROOT ON ROOFS IN NORTH AMERICA AS NEW RESEARCH SUPPORTS LAIMS OF ENVIRONMENTAL BENEFITS, AND POLICIES ENCOURAGING IMPLEMENTATION MULTIPLY

y Joann Gonchar, AIA

Michael Graves's Portland Building will soon have a green roof as the result of a local resolution passed earlier this year. Officials will monitor how effectively the installation mitigates storm-water runoff.

Planted material on top of buildings is hardly a new concept. From the fabled hanging gardens of Babylon to the vernacular sod-covered buildings of andinavia and the settlers of the American reat Plains to earth-sheltered architecture, getated roofs have many precedents.

Today, planted rooftops, while still far om common building practice in North merica, are slowly gaining ground as a growing dy of research supports the claim that green ofs are well suited for our climate. A properly stalled green roof can reduce storm-water noff, provide both heat and sound insulation, d create habitat for birds and insects. As part of network of green roofs, it can mitigate urban at-island effect. According to Green Roofs for ealthy Cities, a nonprofit industry association with the mission of pro-oting the technology, almost 2.5 million square feet of green roofs were anted in North America last year, a 72 percent increase from 2004.

Contemporary green roofs, also known as eco roofs, have their ots in German technology that is well developed after more than three cades of use. Although a number of systems are commercially available d a variety of combinations are possible, a green roof generally consists planted material in a lightweight growing medium on top of a drainage d water-retention layer, a root barrier, and a waterproofing membrane.

CONTINUING EDUCATION

Use the following learning objectives to focus your study while reading this month's ARCHITECTURAL RECORD/ *AIA Continuing Education article. To receive credit, turn to page 142 and follow the instructions. Another opportunity to receive Continuing Education credits in this issue can be found in the sponsored section beginning on page 145.*

LEARNING OBJECTIVES

After reading this article, you should be able to:

1. *Identify the benefits of planted rooftops.*
2. *Describe the composition of planted rooftops.*
3. *Explain why the number of structures with planted rooftops is increasing.*

r this story and more continuing education, as well as links to sources, ite papers, and products, go to ***www.archrecord.com***.

Green roofs generally fall into two categories—either extensive or intensive. Extensive green roofs are lightweight, and may have as little as 3 or 4 inches of soil. They are usually planted with hardy, drought-resistant vegetation that requires little maintenance or irrigation.

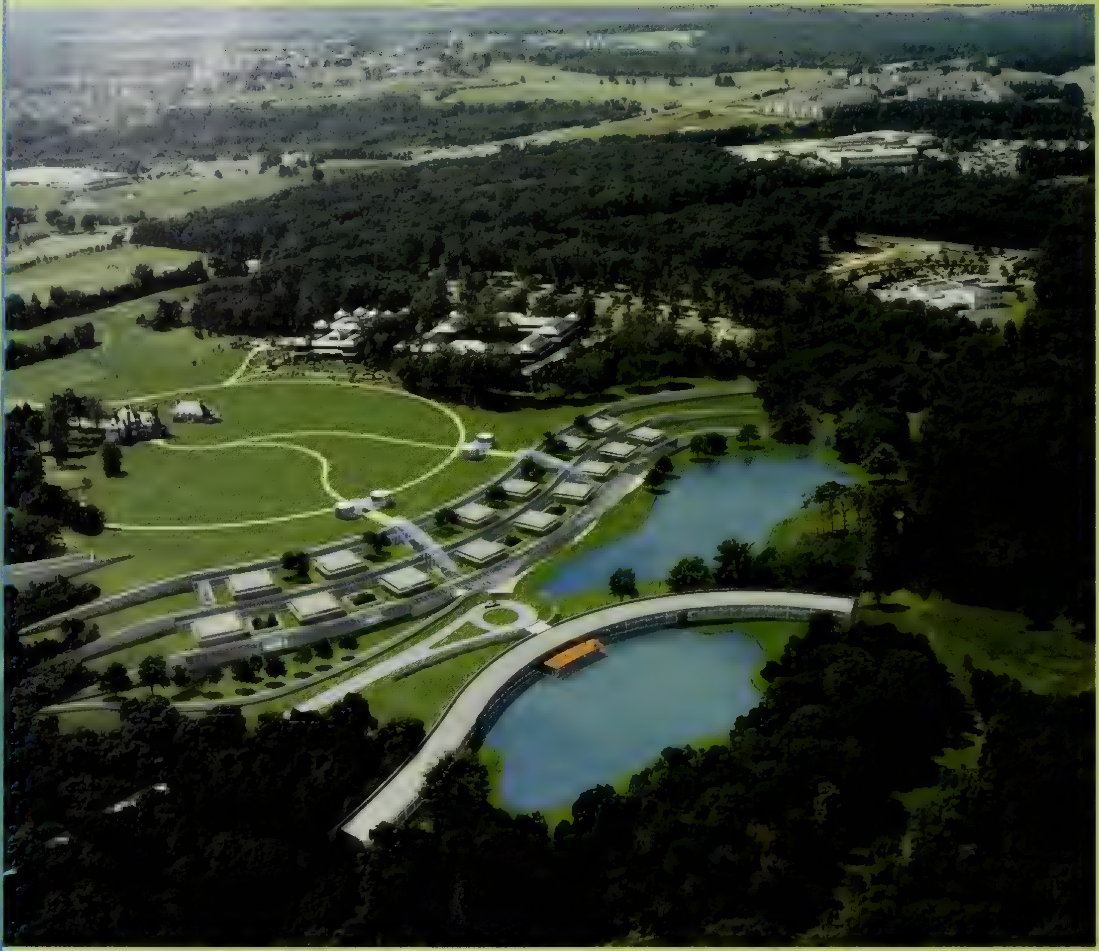
With greater soil depth, intensive green roofs can support a wider variety of plant material, such as flowers, shrubs, or even small trees. These systems can be used to achieve a more landscaped, garden-like environment, but intensive green roofs may require maintenance such as watering, fertilization, or weeding. Designers also need to take into account the heavier roof loads that the deeper soil and more elaborate plantings will impose on the building's structural system.

Sticks and carrots

Green roofs are taking hold most firmly in jurisdictions with policies and incentives that encourage implementation. "About 75 percent of the market is regulatory driven, but I see this as changing over time," says Sandra McCullough, business team leader for Green Grid, a supplier of a modular planted roof system.

In Chicago, building owners have planted more square feet of green roofs than those in any other North American city for two years in a row, according to Green Roofs for Healthy Cities. A total of 2.5 million square feet of green roofs are planned, in construction, or installed, says Michael Berkshire, the city's green projects administrator.

Not surprisingly, Chicago has an aggressive set of programs aimed at increasing implementation of green roofs and other sustainable building practices. Since planting of a 20,300-square-foot green roof on city hall in 2000, Chicago has instituted an incentive in the form of a density bonus for building owners that install green roofs. It also requires green roofs on construction projects that receive public assistance or are



Howard Hughes Medical Institute Research Campus

Slated to open in September, the Howard Hughes Medical Institute is building a research facility covered by a 180,000-square-foot green roof in Loudoun County, Virginia (left). Clusters of offices and conference rooms form the edges of curved and planted terraces. Support spaces no requiring natural light, such as the central plant and parking garage, are located away from the terrace edges.

South Loop Target Store Green Roof Installation

Chicago has an aggressive set of policies to stimulate green roof development. The city requires green roofs on all buildings subject to review by its planning department. It also offers a density bonus and provides matching funds. So far, Chicago has about 2.5 million square feet of green roofs either planned, in construction, or completed. Green roofs have been planted on top of Chicago office towers, multifamily residential buildings, and stores, including the roof of a Target store in the city's South Loop (opposite, left).

Top Cities for Green Roofs (2005)*

1. Chicago	295,600 square feet
2. Washington, D.C.	206,900
3. Suitland, Md.	205,000
4. Ashburn, Va.	120,000
5. New York City	119,895
6. Culpepper, Va.	100,000
7. Austin, Tex.	97,384
8. Arlington, Va.	96,768
9. Des Moines	94,750
10. Ottawa, Ont.	84,600

*Represents 2005 installation activity reported by Green Roofs for Healthy Cities corporate members.

Building owners in Chicago, a city with several policies directed at promoting green roof implementation and sustainable building practices, installed more square feet than those in any other North American municipality in both 2004 and 2005.

subject to review by the department of planning. Earlier this summer, the city council approved a plan to offer matching funds up to $100,00 toward the installation of green roofs on downtown buildings. "Ou approach is a combination of the carrot and the stick," says Berkshire.

THE MARKET FOR GREEN ROOFS IS STILL PRIMARILY REGULATORY DRIVEN, ACCORDING TO SYSTEM SUPPLIERS.

Green roof development is also relatively strong in severa Washington, D.C.–area communities. Some sources attribute thi demand for green roofs to the regional presence of the General Service Administration (GSA) and its commitment to sustainable building practices and certification of its facilities under the U.S. Green Buildin Council's LEED program. LEED recognizes green roofs as a storm-wate rate- and quantity-management strategy. "Around Washington, D.C., th GSA is a large public landowner that is 'walking the talk,' " says Steve Peck, Green Roofs for Healthy Cities president.

Local regulations directed at safeguarding the health of th

National Oceanic and Atmospheric Administration At NOAA's new satellite operations center (below and bottom) in Suitland, Maryland, a conventionally roofed, 70,000-square-foot building houses the satellite control equipment. But the bulk of the facility—a 140,00-square-foot office space—is built into a grassy slope. The site's primarily permeable surfaces provide almost all of the required storm-water quantity and quality management.

esapeake Bay stemming from the federal Clean Water Act may also be sponsible for the regional growth. In many of the municipalities comising the bay's watershed, a green roof is considered an acceptable rm-water-management practice, says Pat Devlin, director of policy and otection at the Alliance for the Chesapeake Bay.

One recently occupied GSA project, the $61 million National eanic and Atmospheric Administration (NOAA)'s satellite operations nter, in Suitland, Maryland, has the largest completed green roof on the stern Seaboard. Designed by Morphosis and Einhorn Yaffee Prescott, an proximately 70,000-square-foot, above-ground, conventionally roofed ilding houses the satellite control equipment. But the bulk of the facil- —a 140,000-square-foot office space—is built into the side of a grassy pe. Courtyards and skylights provide natural light to the interior.

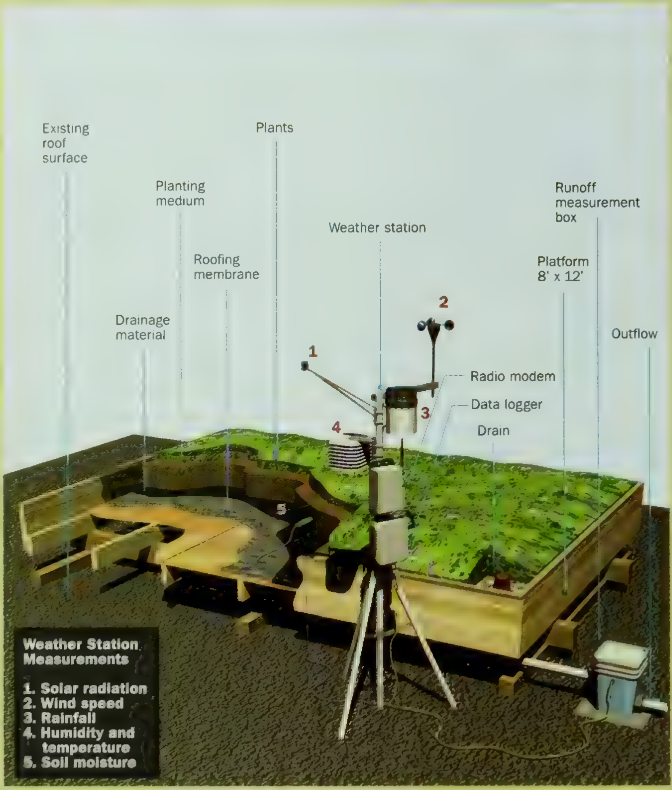
The primarily permeable surfaces of NOAA's site slow the rate d quantity of runoff and help remove undesirable solids and nutrients m this water, according to Max Kantzer, an associate at A. Morton omas & Associates, the project's civil engineer. The site needed only nimal storm-water-management features, such as a small detention ucture, and shallow grass-lined swales. "The green roof reduces the amount of storm-water management needed on-site, and contributes a significant amount of water-quality control," he says.

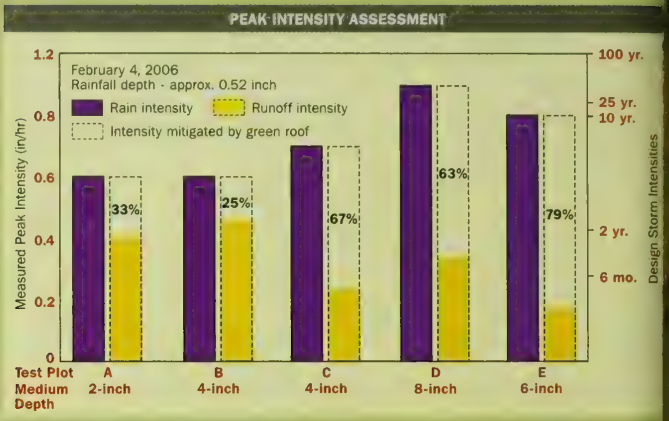
Another project under way in the region will have an even larger green roof. The Howard Hughes Medical Institute is building a research center in Loudoun County, Virginia, designed by Rafael Viñoly Architects (RVA). Clusters of offices and conference rooms are set into curved terraces covered by a 180,000-square-foot green roof punctuated with interior courtyards. Support spaces not requiring natural light, such as a 300-car parking garage and a central plant, are also submerged under the green roof but are set away from the terraced edges.

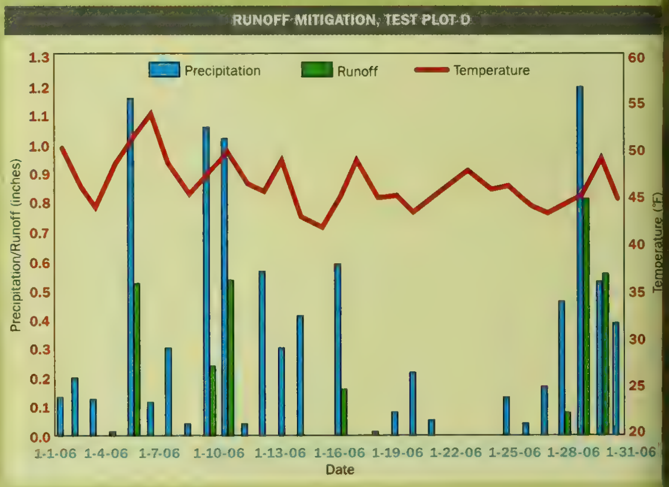
The landscaped roof of the Howard Hughes facility will retain more storm water than a traditional lawn, and the runoff will not require extensive treatment to remove contaminants, due to its engineered drainage and planting media, says Jay Bargmann, AIA, RVA vice president. A built-up roof is considered to have a runoff coefficient of 0.95; in other words, about 95 percent of the water hitting a conventional roof will leave the surface and need to be accounted for in the design of the building's storm-water system. In comparison, a traditional lawn or turf area is considered to have a runoff coefficient of 0.35, while that of

Green Roof Evaluation Project

A Seattle research project is tracking both weather and runoff data at five green roof test plots (below). The plots each employ a different green roof system. Performance under the same conditions varies (right).







Data from one Seattle test plot (above) demonstrates that even after successive storms, green roofs typically mitigate at least some runoff.

the Howard Hughes landscaped roof is 0.25. But Bargmann points to a less tangible benefit of the green roof as even more important. As he notes, "The project sets a standard for [preserving] open spaces in that suburban environment."

In the Pacific Northwest, a more modest size green roof is in the process of being installed on top of Michael Graves's Portland Building, completed in 1982. The 18,200-square-foot extensive installation, designed by Macdonald Environmental Planning, will include a variety of sedums and grasses, and was spawned by a city council resolution passed earlier this year. The regulation requires that new city buildings include a green roof, if practical, and also applies when roofs on existing buildings are replaced.

The Portland Building roof will include a system to monitor how well the installation mitigates storm-water runoff. City officials hope to ultimately use the data collected, along with data from four other roofs it has been monitoring for several years, to fine tune requirements for various incentives aimed at increasing implementation of the technology. Results thus far show that the installations mitigate between 30 and 60 percent of total runoff, depending on factors such as the thickness and composition of the growing medium, and the type of plant materia according to Tom Liptan, the city's environmental specialist.

Portland offers a floor area ratio (FAR) bonus to building owners who incorporate green roofs into buildings in the center of the cit About 12 projects have taken advantage of the policy since it was instituted in 2001. "We are now starting to evaluate how we might improv the FAR bonus or develop policy to encourage green roof development i other areas of the city," says Liptan.

EVEN THE MOST UTILITARIAN EXTENSIVE INSTALLATION CAN ADD $7 TO $10 PER SQUARE FOOT TO THE COST OF A ROOF.

Green roof advocates say incentives are necessary to offset th expense. Even the most utilitarian extensive installation adds about $7 t $10 per square foot to the cost of a roof, estimates Drew Gangnes, direct of civil engineering at Magnusson Klemencic Associates, a Seattle-base consulting firm.

Some jurisdictions allow a green roof as a substitute for oth

lliam Duff, Architect, WDArch.com

James Walbridge, Architect, tektonarchitecture.com

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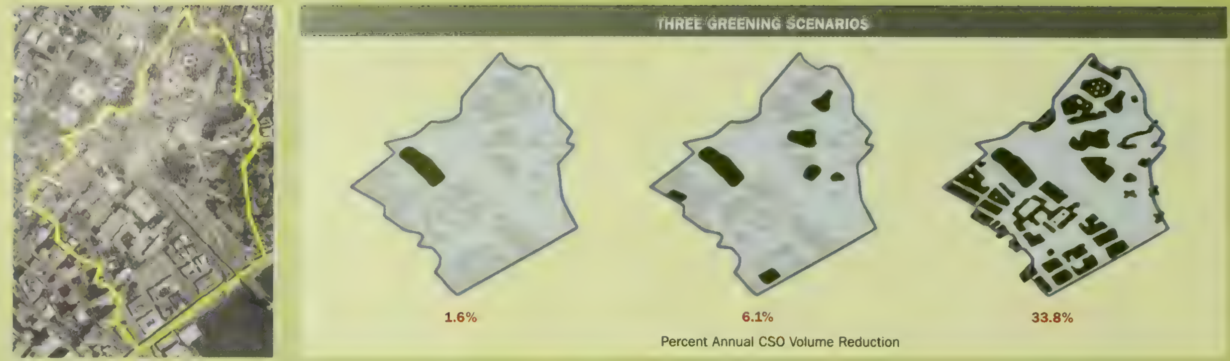
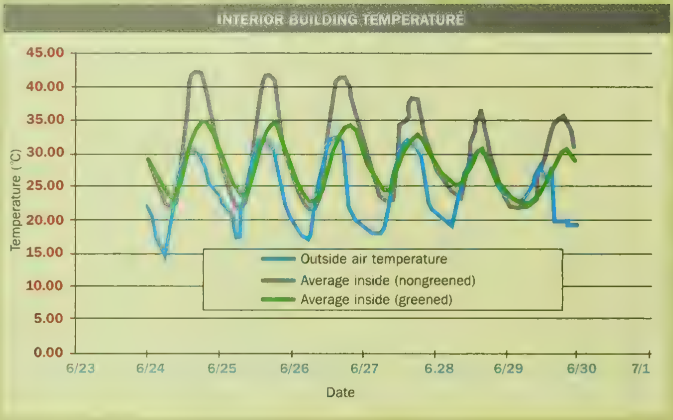


Earth Pledge Storm-Water Model
Predictive models can be helpful in analyzing the aggregate impact of a network of green roofs on an entire neighborhood. Earth Pledge, a New York City–based environmental group, is developing a model that can be used to evaluate the affect of green roof development on urban storm-water infrastructure. It shows that greening the roofs for one sewer-shed subbasin in Lower Manhattan would reduce the volume of combined sewer overflows by almost 34 percent.



Penn State University Center for Green Roof Research
A green roof can keep buildings cooler in summer (above) and can therefore help save on air-conditioning costs, according to studies conducted at PSU's Center for Green Roof Research (right). This strategy makes most sense in regions with long cooling seasons.

storm-water-management measures. However, even elimination of an underground retention tank will cover only 30 to 70 percent of the roof's cost, says Gangnes. "The public sector should provide incentives since there are public benefits," he says.

Gangnes's firm, along with a construction firm and several local developers, is monitoring the performance of five green roof test plots installed on top of four existing buildings around Seattle in February 2005. The 8-by-12-foot test plots each employ a different proprietary system, with a different thickness and composition of growing media and different plant material. So far, the data collected indicates that even in soggy Seattle, green roofs can be an effective storm-water-management strategy. The plots, even after successive storms, generally held water long enough for it to evaporate from the soil and transpire from the plants—a process called evapotranspiration.

Some researchers are developing predictive modeling tools to help building designers and owners calculate the retention and detention potential of a green roof with specific characteristics on an individual building. Earth Pledge, a new York City–based nonprofit environmental organization, is developing such a tool. The program will also have macro capabilities, allowing urban planners and government leaders to evaluate the aggregate impact of green roof development in a given sewer shed and direct resources. "It is a policy-making tool that will help identify the neighborhoods where green roofs will have the most significant impact," says Leslie Hoffman, executive director.

Toxic cocktail

A model of the type that Earth Pledge is developing could be particularly useful in cities with older, overtaxed combined sewer systems that transport both storm water and sewage. About half the time it rains in New York, for example, the volume of raw sewage and contaminated storm water exceeds the system's capacity. These occurrences, known as combined sewer overflows (CSOs), result in the release of this toxic mix directly into the city's surrounding waters.

Earth Pledge has so far built out the model with building-stock

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data, land-use characteristics, and infrastructure information for one sewer-shed subbasin in Lower Manhattan. The model predicts a 34 percent reduction in the volume of CSOs if all buildings in the study area were covered with green roofs. The reduction in the number of incidences of CSOs would be minimal due to the high percentage of impervious surfaces in the selected sewer shed, according to Earth Pledge. The group hopes to license the model to other cities, incorporating their rainfall and infrastructure data.

The storm-water model is part of a larger Earth Pledge green roof project. About a year ago, the group installed a 35,000-square-foot green roof on top of Silver Cup Studios in Long Island City, Queens, and is monitoring its thermal performance and storm-water-management capabilities. It will also monitor a 10,000-square-foot green roof that it is now installing on top of a warehouse in the same New York City neighborhood. Data from both sites will be used to test and refine the model.

TAILORED MODELING TOOLS COULD HELP DETERMINE WHERE GREEN ROOFS WOULD HAVE THE MOST SIGNIFICANT IMPACT.

Storm-water issues are not the only area of current green roof investigation and modeling. One of several topics of study at the Pennsylvania State University (PSU) Center for Green Roof Research is the potential for green roofs' evaporative cooling to ameliorate the urban heat-island effect. PSU's facilities consist of six garden-shedlike wood-framed buildings that are heated and cooled. Three of these buildings have green roofs, while the other three have conventional roofs and serve as experiment controls, explains Robert D. Berghage, associate professor of horticulture. He tracks the temperatures on the test buildings' roofs and then determines the impact at the city scale through modeling.

Brad Bass, an adjunct professor at the Center for the Environment at the University of Toronto, has developed a modeling tool that can predict how much energy can be saved by including a green roof on an individual building. It takes into account such factors as local climate data, building configuration, and regional construction practices. Some researchers caution, however, that a green roof employed merely as an energy-saving device may not make economic sense to a building owner in a climate with a short cooling season.

PSU tests confirm that the insulative properties of green roofs reduce thermal loading and therefore can help save on air-conditioning costs. However, green roofs also prevent desirable heat during winter, says Berghage. But he points out that use of green roofs in climates with short cooling seasons could still have advantages. Widespread adoption of measures like green roofs that help cut energy use in the summer, the season associated with peak utility loads, could reduce the need for additions to the power-generation infrastructure. "Although this may not translate into a benefit for an individual owner, there is a societal benefit." ■

AIA/ARCHITECTURAL RECORD CONTINUING EDUCATION

INSTRUCTIONS

- **Read the article "Rooftops Slowly, but Steadily, Start to Sprout" using the learning objectives provided.**
- **Complete the questions below, then fill in your answers (page 211).**
- **Fill out and submit the AIA/CES education reporting form (page 211) or download the form at www.archrecord.com to receive one AIA learning unit.**

QUESTIONS

1. Contemporary green roofs have their roots in which?
  a. German technology
  b. nonprofit industry
  c. hanging gardens of Babylon
  d. sod-covered Scandinavian buildings

2. Characteristics of extensive green roofs include all except which?
  a. they are lightweight
  b. use a wide variety of plant materials
  c. require little maintenance
  d. require little irrigation

3. Characteristics of intensive green roofs include all except which?
  a. a gardenlike environment
  b. deeper soil
  c. require fertilization
  d. hardy, drought-resistant plants

4. The benefits of a planted rooftop include all except which?
  a. provide heat and sound insulation
  b. mitigate urban heat-island effect
  c. increase storm-water runoff
  d. create habitat for birds

5. Research supports the claim that green roofs are which?
  a. contributors to combined sewer overflows
  b. contributors to desirable heat gain in winter
  c. well suited for North American climate
  d. a substitute for insect habitats

6. Green roof technology is most prominent where?
  a. in areas with hot, dry climates
  b. in areas where policies and incentives encourage the technology
  c. in Washington, D.C.
  d. in New York

7. Where is a green roof considered an acceptable storm-water-management practice?
  a. in General Services Administration buildings
  b. in Seattle
  c. in some municipalities comprising Chesapeake Bay's watershed
  d. in Chicago

8. The Portland Building is getting a green roof for which reason?
  a. the city offered a bonus to building owners who incorporate a green roof
  b. all city buildings must have a green roof when their roof is replaced
  c. all new city buildings must have a green roof
  d. all GSA buildings must have a green roof

9. Why do green roof advocates say incentives are necessary
  a. to offset the cost of adding green roofs to a building
  b. even if the green roof substitutes for other storm-water management, the roof still costs more
  c. there are public benefits to green roof installations
  d. all of the reasons above

10. Research in five test plots in Seattle has shown which outcome?
  a. Seattle is too soggy for green roofs to help storm-water management
  b. green roofs do better in cloudy, rainy climates
  c. green roofs need special considerations in rainy climates
  d. green roofs can be an effective storm-water-management technique

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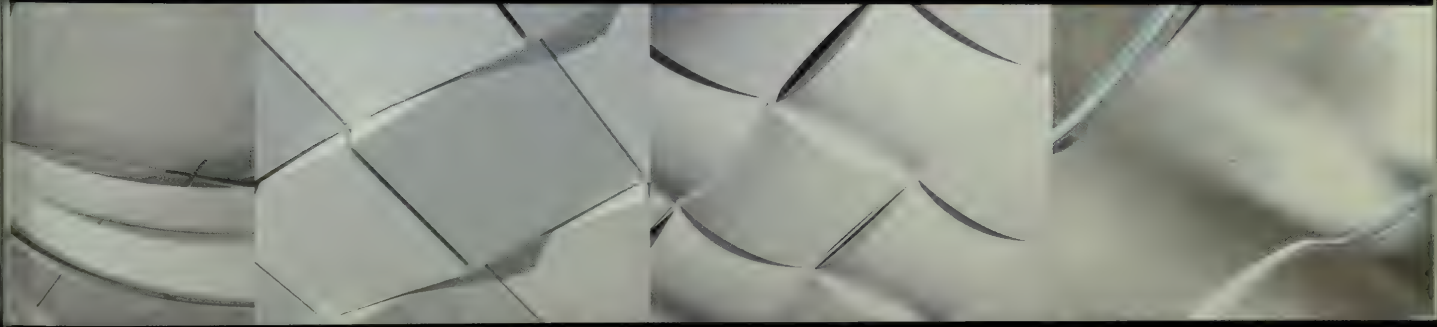

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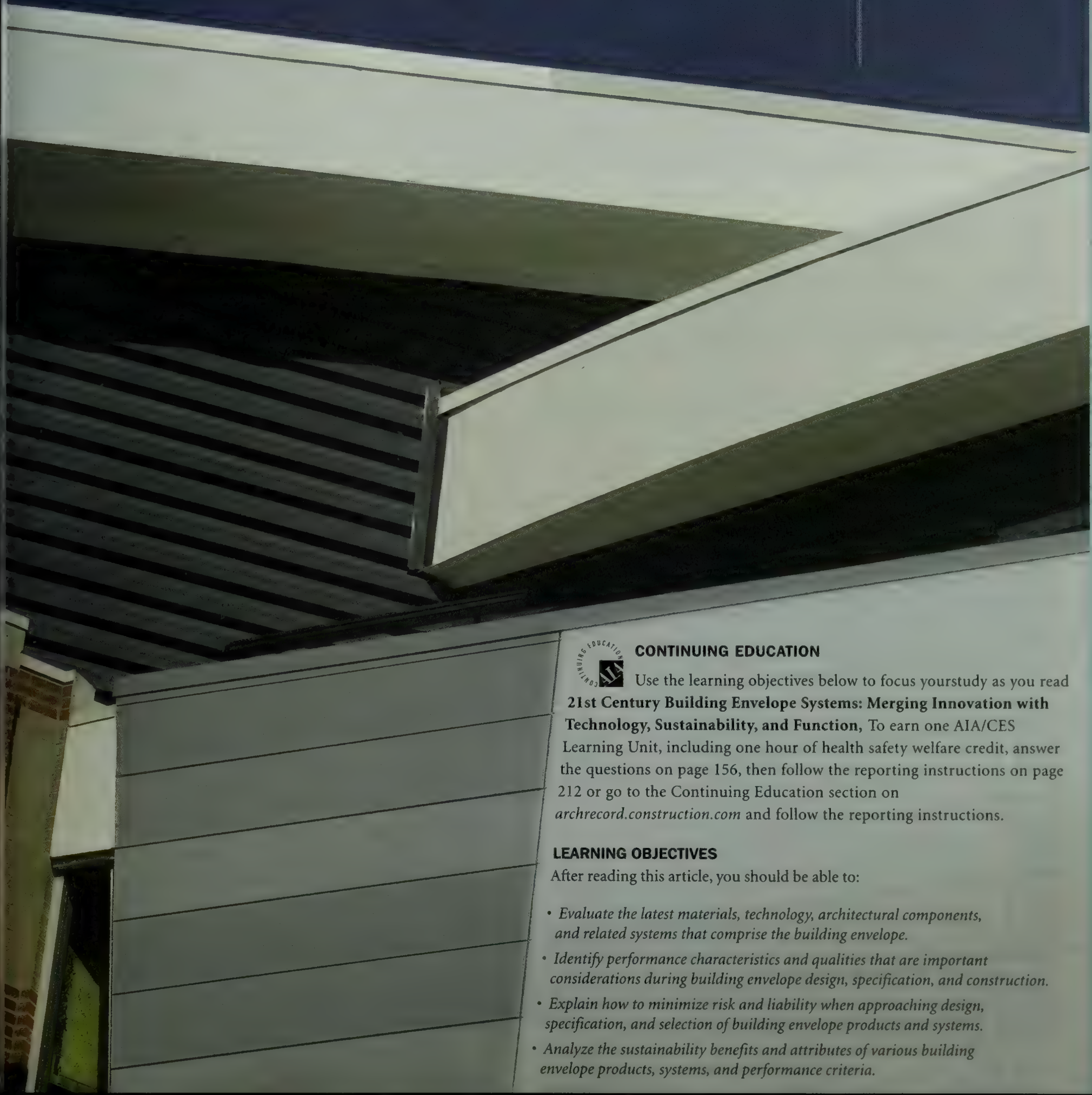


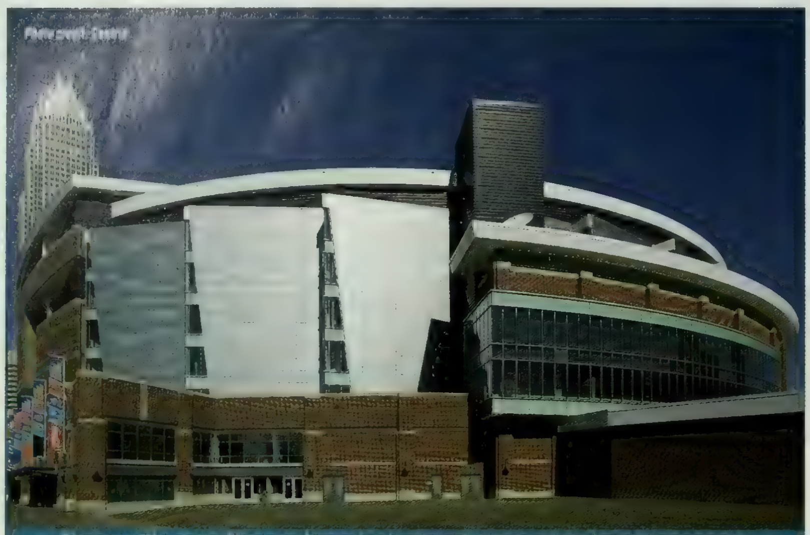
CONTINUING EDUCATION

Use the learning objectives below to focus yourstudy as you read **21st Century Building Envelope Systems: Merging Innovation with Technology, Sustainability, and Function,** To earn one AIA/CES Learning Unit, including one hour of health safety welfare credit, answer the questions on page 156, then follow the reporting instructions on page 212 or go to the Continuing Education section on *archrecord.construction.com* and follow the reporting instructions.

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Evaluate the latest materials, technology, architectural components, and related systems that comprise the building envelope.*
- *Identify performance characteristics and qualities that are important considerations during building envelope design, specification, and construction.*
- *Explain how to minimize risk and liability when approaching design, specification, and selection of building envelope products and systems.*
- *Analyze the sustainability benefits and attributes of various building envelope products, systems, and performance criteria.*



The new Charlotte Bobcats Arena is checkered with insulated metal composite wall panels in custom shades of gray for an original appearance.

Innovative architectural design is enhanced by careful attention detailing, selection and specification of compatible materials and rela component systems. At the same time, architects, specifiers, and des professionals must be aware of component installation methods construction techniques. With so many advances in manufactu processes, emerging new materials, and enhanced technology in marketplace, along with ongoing updates of building codes and indus testing criteria, and an often unskilled labor force, the required knowle base for effective building envelope design is constantly expanding.

"A multi-component building envelope system that is engineer fabricated, and assembled by the manufacturer can reduce design effo errors, and associated liability, if architects and specifiers can define required performance criteria. Because the system can be tested as assembly extensively in labs, it avoids field-testing, which is often requi for large-scale buildings or critical facilities. The systems also ben owners of large and multiple facilities because of the standardization facility design and management. They generally simplify construct planning and shorten project duration," observes Tian Feng, AIA, FCSI, Ch Architect, San Francisco Bay Area Rapid Transit, and former construct expert witness consultant, Oakland, California.

21st Century Building Envelope Systems: Merging Innovation with Technology, Sustainability, and Function

By addressing energy efficiency, moisture infiltration, aesthetics, and occupant comfort, building envelope elements and component systems enhance design opportunities and minimize potential risk

By Barbara A. Nadel, FAIA

"The building envelope is more than a façade–it is the poetic mediation between an internal spatial realm and the outside world."
-Antoine Predock, FAIA, 2006 American Institute of Architects Gold Medalist
Antoine Predock Architect, PC, Albuquerque, NM

The fundamental goals of a successful building, regardless of location, aesthetics, program, owner, and building type, are essentially to keep water out and allow thermal control within. The building envelope encompasses the entire exterior surface of a building, including walls, doors, and windows, which enclose, or envelop, the interior spaces. Weaknesses in the building envelope can result in several undesirable results, from moisture infiltration, often leading to mold and mildew; damage caused by wind loads, high energy costs, ongoing maintenance problems, and failure of one or more architectural and engineering building systems. Any of these scenarios, and the numerous ripple effects that may ensue, can potentially increase risk and liability concerns for architects, design professionals, building owners, and occupants.

For these reasons, and the desire to promote sound professional design standards, a thorough understanding of building envelope design methods and construction techniques are critical aspects of architectural practice. When building envelope problems arise, liability concerns often focus on factors and parties relating to design, construction, manufacturing, and testing of systems and materials.

This article will address several components and systems that comprise the build envelope, and explore innovative qualities, trends, and characteristics. These build envelope design elements include: high performance insulated metal composite pane point supported, bolted glass systems; curtain wall and ribbon window systems; seaml building envelope solutions using different types of glass and fenestration componen hurricane-resistant aluminum composite materials with high strength organic fiber, an product not visible on the building envelope exterior, a liquid-applied flashing system.

Insulated Metal Composite Panels

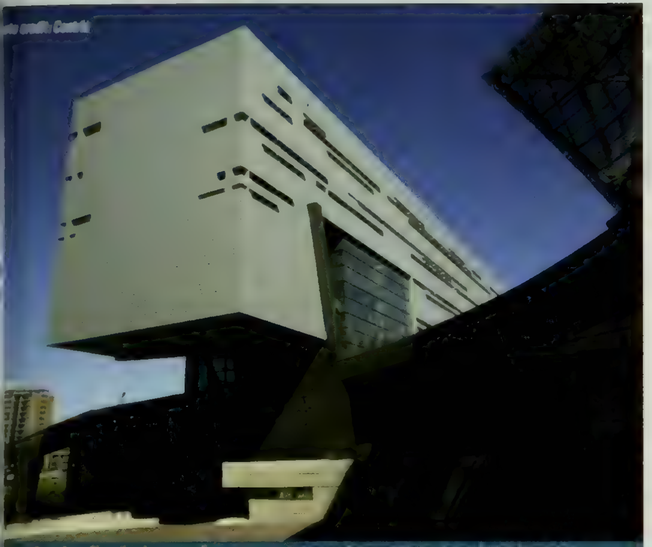
Innovative building envelope materials often address several issues, from promot sustainability and energy efficiency, to minimizing liability and risk stemming from m issues. At the 2006 AIA Convention, William McDonough, FAIA, described the developm of "cradle to cradle" strategies, which analyze the nature of materials in products. T analysis goes beyond cradle to grave (manufacture to disposal), extending from creation re-creation, through complete cyclical reuse.

Sustainability and Product Life Cycle

Cradle to Cradle Certification, a new sustainability evaluation method, is administered by McDonough Braungart Design Chemistry (MBDC), which reviews material or product ingredients, and the formulation for human and environmental health impacts throughout the overall life cycle. The certification assesses a material's potential for being recycled or safely composted. Certification criteria include: material reutilization and design for the environment; energy; water, and social responsibility. The program focuses on products whose materials are perpetually circulated in closed loops, thus cradle to cradle.

In an increasingly risk-prone environment, desig professionals mus have a broad understanding of building envelope design and construction.

A series of insulated metal composite panels have met, or exceeded, certification criter These insulated metal composite panels have several characteristics that may help building qualify for credits within the U.S. Green Building Council's Leadership in Energy a Environmental Design (LEED®) Green Building Rating System, including:



In the final phase of a campus transformation, insulated metal composite panels on the exterior of the housing building help create the new focal point of the University of Cincinnati campus.

- **ested insulation value:** Based on independent testing, insulated metal composite anels show low U-values, ranging from 0.050 to 0.076 (lower is better). This series of etal composite panels provides superior insulating value that can result in significant ergy savings.
- **igh recycled content:** Based on the LEED®-NC Reference Guide, this panel series as an average post consumer recycled content of 16 to 19 percent, and an average post dustrial recycled content of six to seven percent, for a total recycled content of 22 26 percent.
- **ow-emitting materials:** A factory-applied sealant may have a volatile organic mpound (VOC) below the limit established by LEED®.
- **educed jobsite scrap:** Pre-fabricated panels made in the factory result in little to no bsite scrap generated, since field cutting of the panels is generally not required. roducts that are shrink-wrapped eliminate wasteful crating and packing materials.
- **egional materials:** LEED®-NC (for new commercial construction and major novation) provides credits for products manufactured within 500 miles of e project site. In many instances, this criteria is achievable for insulated etal composite panels systems.
- **ustainability:** Insulated metal composite panels replace multiple aterials with one-piece panels, reducing jobsite scrap and minimizing e fuel consumption multiple freight deliveries would require. The urability and advanced thermal and moisture protection qualities of sulated metal composite panels promote energy efficiency and duce maintenance demands.
- **urability:** Insulated metal composite panels are durable, low aintenance, and decrease the need for water-washings or toxic chemical eanings. A product life cycle averaging 20 years or more minimizes the eed for replacement.
- **nergy costs:** Reflective coatings are typically available for high solar flectance, potentially resulting in lower building cooling costs.

T rmal and Moisture Protection

A nced thermal and moisture protection (ATMP) refers to building envelope systems that provide superior thermal and moisture control, especially n compared to traditional wall systems.

Innovative ATMP solutions involve insulated metal composite panels that are installed outboard of a building's metal studs. Available systems can be utilized individually as a complete exterior wall system or combined with other exterior aesthetic panels for a superior multi-component wall solution. ATMP is important because many city, state, and national codes are requiring better thermal barriers within the building envelope, as energy conservation continues remain a priority.

Even the smallest leak in an air or vapor barrier can be a potential source for moisture control failure. Air and pressure alone can cause significant amounts of moisture-laden air to flow through cuts, rips, and staple penetrations. The moisture can condense and remain inside the wall cavity, damaging materials, and thus creating an environment for mold, which causes other problems.

Liability Issues

Mold concerns and related health issues linked to this fungus have been the central issue of many lawsuits. The Insurance Information Institute estimates that $3 billion in building mold claims were paid in 2002. Specifying an insulated metal composite panel system engineered for superior thermal performance and moisture control will significantly reduce mold-related risks for owners, occupants, and design professionals.

There is another reason that specifying such systems will further reduce risk and liability. "Insulated metal composite panel construction requires one supplier and installer, so the need for multiple trades, contractors, materials, and manufacturers on the jobsite is significantly reduced. In other types of construction, if leaks occur, it's hard to determine who is responsible for the faulty work or installation. High performance insulated metal composite panels eliminate this potential scenario, thereby reducing risk and liability concerns for owners and architects," said Rick Brow, Director of Marketing, CENTRIA Architectural Systems, Moon Township, Pennsylvania.

Insulated metal composite panel systems are suitable in new construction and renovations, in all climates. In addition to sustainability, superior thermal and moisture protection performance, and reducing mold concerns, they offer aesthetic qualities as well. Insulated metal composite panel systems are available in a variety of finishes, colors, shapes, and profiles with reveals, curves, and other design options that meet technical criteria, testing standards, and national codes.

Insulated metal composite panels with an aggregate coating create the appearance of pre-cast on the exterior of the Parkwest Medical Center in Knoxville, TN.

The Mall at Millenia, in Orlando, Florida, uses point supported bolted glass to maximize transparency between the outdoors and the indoor retail environment. Architect: JPRA Architects

Point Supported, Bolted Glass: Maximizing Transparency

Building envelope materials and systems can enhance dramatic interior spaces, such as lobbies and public assembly areas, by maximizing natural daylight and visibility to the outdoors. Point supported, bolted glass systems provide maximum transparency to large expanses of the building envelope. This bolted glass system relies on mechanical fasteners to connect the glass to the structural frame, without mullions.

The point supported, bolted glass system is comprised of glass, fittings, and structural supports. Each element has many options, to meet the design solution for various applications. Structural glass façades rely on the quality of the glass for their performance and aesthetics. An extensive range of glass types can be used with this system, for flexibility of design, appearance, performance, and transparency, such as tempered, laminated, coated, insulating, high performance energy efficient, acoustical, and solar glass.

Structural elements that work with the system include stainless steel cables, space frames, simple steel pipes and tubes, and elaborate prefabricated trusses. The fitting is critical, to ensure loads are transferred to the structural elements supporting the glass.

Point supported, bolted glass is a flush glass application using a countersunk bolt in the glass that is bolted to the building structural system. This method provides a flush glass surface using countersunk holes, and stainless steel fittings to connect the glass façade to the structure, instead of the conventional framing systems. The result is an engineered system with minimum of structure and maximum visual clarity. A silicone seal between adjacent panels provides weatherproofing.

These systems are suitable for various applications and projects of all sizes and budget not only for monumental, iconic buildings. Successful applications include airports, hig rises, cultural facilities, shopping malls, courthouses, universities, hospitals, and corpora headquarters.

Design and Performance Benefits

The point supported, bolted glass system is suitable for new construction and renovatio in any climate zone. Flexibility of design options enables architects to use tinted glas silkscreen patterns, various colors, as well as large spans of glass. Other advantage include:

- Ability to glaze in any plane, up, over and under, from canopies and roofs to skylights a soffits, without metal framing.
- Enhanced thermal and optical performance, with the use of soft coat Low-E product to provide better thermal insulation and solar control.
- Acoustical high performance.
- Impact resistance, and tested for various conditions and codes.
- Blast resistance, through the use of specially engineered connections and high-streng laminates.
- Resistance to high winds and seismic loads.
- Design for peak performance properties, including for a super typhoon, equivalent a Category 5 hurricane in the Far East, for over 200 psf pressure.

This glass system has been tested for hurricane impact in Broward County, Florida. Base on updates to the Florida Building Code, as of Summer 2006, additional test results a pending.

Recent Developments

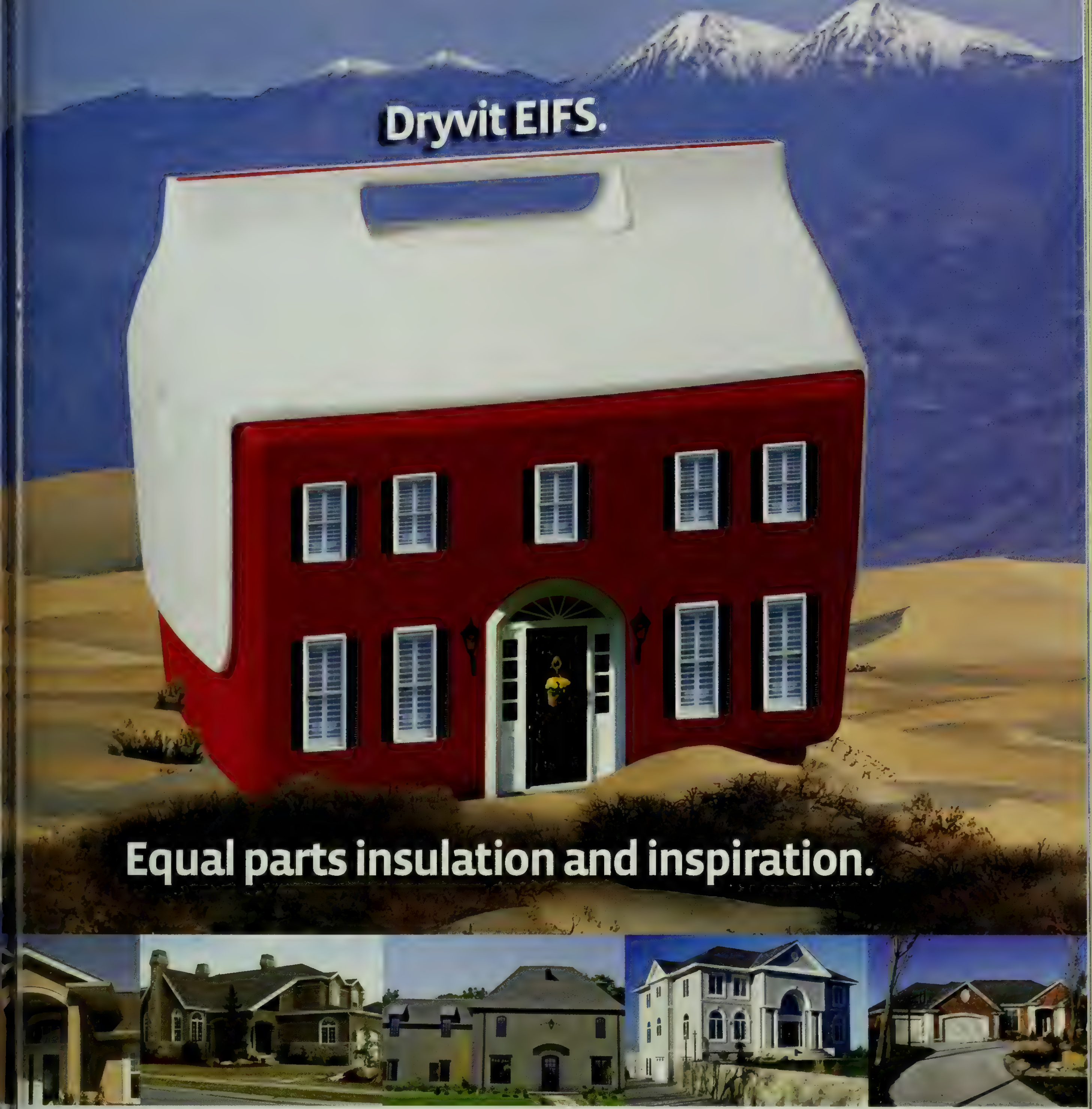
Bolted glass products have three new and innovative developments, impacting performan and aesthetic qualities.

New technology has allowed the countersunk bolts to be hidden, concealed, or sunk in th glass panel, further eliminating the use of metal. The result enhances the overall look the glass façade.

Bolted structural glass is fully tempered for strength. New tempering technology available to create glass that is flatter, and minimize waviness, known as roller wa

Photo credit: W&W Glass

Point supported bolted glass allows visitors to enjoy natural daylight at the Rose Center for Earth & Space, American Museum of Natural History, New York City Architect: Polshek Partnership LLP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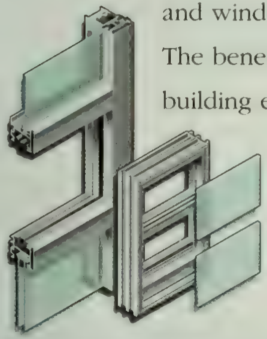

Sky Condo in Las Vegas, Nevada features curtain wall, operable windows and architectural glass—all from Oldcastle Glass® Architect: Klai Juba Architects.

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Curtain wall and window systems with excellent thermal performance can lower energy costs and add natural daylight to public spaces

distortion. During the tempering process, glass softens as it gets hot. Newer tempering furnaces and technology can limit roller wave distortion, thereby improving the optical qualities of tempered glass.

Newer quality control measures and techniques will reduce nickel sulfide, and thereby limit breakage. Nickel sulfide is a contaminant inherent in heavy float glass, which is typically 12mm (about a half-inch) thick, or greater. During the tempering process, contaminants are trapped and can expand, causing spontaneous breakage. The goal during quality control is to limit and catch the nickel sulfide in the glass, and create a safer product through what is known as the heat soaking process.

"These products need complete, fully engineered systems in order for the owner to obtain their full benefit. The glass and related hardware fittings go together, and should ideally be from the same source, not different systems with different warranties, which increases risk to the owner and design professionals," says Jeffrey Haber, Managing Member, W&W Glass, LLC, Nanuet, New York.

To avoid these potential problems, specifications should indicate a single source approach for furnishing and designing the system, to ensure that one manufacturer is responsible for engineering and glass production. This will provide better integration of all system components and warranties, and minimize risk and liability.

As in other building envelope systems, it is important that compatible elements perform to specified loads, meet aesthetic criteria, and don't leak or become maintenance problems over the building and product life cycle, which generally ranges from 20 to 50 years.

Curtain Wall and Ribbon Window Systems

Architectural product manufacturers are increasingly developing systems comprised compatible components that often provide many advantages. Another approach to this tre involves the use of curtain wall and ribbon window systems, utilizing alumin fenestration. Curtain walls refer to a system that does not carry any dead load from t building other than its own weight. The loads are generally transferred to the main structu through connections at floors and building columns. Curtain walls are designed to resist and water infiltration, and span multiple floors. Ribbon windows are horizontal architectu elements that are located around the building façade on a per floor basis.

"Building envelope systems must be designed with the goal of reduced field labor cos greater thermal efficiency, and more flexibility for off-site assembly, sealing, and glazi This will result in savings that can be passed on to building owners," says Greg Hall, Sen Product Development Designer, Vistawall Architectural Products, Terrell, Texas.

A new high-performing pressure-equalized curtain wall system features exceptional wa control, outstanding thermal performance, straightforward fabrication techniques, and ea installation. Several new related curtain wall framing systems share many common par such as gaskets, setting blocks, face members and anchors. This common chassis allo architects to combine two applications, curtain walls and ribbon windows, from a sin system on the same building. These compatible parts allow easy transitions to occ between curtain wall and ribbon window details, design features, and constructi installation. Use of common members and components between systems reduc construction errors and costs, and simplifies site fabrication.

Among the curtain wall and ribbon window systems, even more variations are availab such as a traditional pressure wall system, composite vertical mullion with traditior pressure wall horizontal members, and inside-glazed curtain wall, utilizing compos mullions throughout. These systems are typically available to meet a range of performan and thermal efficiency criteria. For maximum flexibility, these systems also share common platform, the same glazing pocket design. This allows easier transitions from o system to another in the same project.

Curtain wall systems that offer excellent thermal performance can provide lower ener costs to building owners and tenants, and add to a project's sustainability features.

Some new curtain wall systems utilize composite mullions, which offer several advantag They include better thermal performance, decreased field labor due to factory-assembl one-piece design, and reduced glazing time due to elimination of screw-applied tempor glass retainers.

Photo credit: Vistawall

Curtain wall and ribbon window systems offer many component variations to allow design flexibility and thermal efficiency.

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The inside-glazed version of the composite mullion curtain wall offers added benefits of glazing the system from inside the building. This feature eliminates the need for scaffolding, along with the safety risks and field installation costs, and further improves thermal performance. These curtain wall systems are suitable for projects in all climates, year round.

Flexibility of design options is another aspect that allows design professionals and specifiers to address finishes, sunshade systems, loading capabilities, horizontal mullions, and various tools for LEED® certification under the U.S. Green Building Council's LEED® Green Building Rating System.

A new ribbon window system provides a high level of thermal performance, and offers many accessories to accommodate various door framing and anchoring options. High performance criteria include levels of air infiltration, static water, deflection load, structural load, sound transmission class (STC), thermal performance, and testing results and certifications by recognized industry organizations, such at the National Fenestration Rating Council (NFRC).

> ***"When the Gulf Coast was hit by Hurricanes Katrina and Rita, flying debris caused significant damage, in addition to the flooding. Some building envelopes held up better than others." - Doug Ashe, AIA***

Seamless Building Envelope Solutions and Solar Glass

Innovation can apply to the way services are delivered, as well as to new and different methods of using technology, materials, and products. Delivering quality products and services in the building industry is generally dependent on effective project management, and meeting budgets and schedules. When manufacturers meet project targets, they provide enhanced value to building owners and design professionals, in addition to the high performance characteristics inherent in the building envelope products they provide.

Four Seasons Hotel & Tower, Miami, Florida. Architect: Bermello, Ajamil & Partners and Gary Edward Handel Associates.

Multiple vendors, trades, installers, and contractors can complicate project coordination, especially when glass, metal, and storefront window suppliers and different warranties are involved. Each additional party and company involved during the design, construction, manufacturing and testing process adds more risk to projects, as well as potential costs and scheduling challenges.

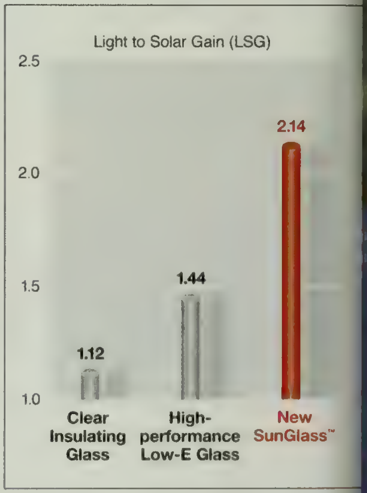
"Providing a one-stop, seamless building envelope solution to owners, architects and design professionals can significantly streamline constructio management. The benefits of this approach include reducing the numbe of vendors, better delivery coordination, minimizing procurement delays and the ability to provide a single warranty for the entire system. All o these factors mean less risk during construction, faster projec completion, and lower total project costs," says Deep Bhattacharya, Vice President of Business Development and Technology, Oldcastle Glass Inc., Santa Monica, California.

Architectural elements considered part of building envelope solutions include curtain wall systems, skylights, operable windows, storefronts doors, and structural glass walls. Additional elements that are part o the building envelope include glass canopies, metal panels, revolving and sliding doors, and related engineered products.

Energy Efficiency Through Solar Control Glass

With energy costs rising steadily, the need to control solar heat gain and maintain energy efficient buildings that provide occupant comfort and aesthetics is an opportunity fo innovation.

A new type of neutral color solar control glass allows sunlight to enter a space, without accumulating heat gain, through a combination of high performance solar control and visible light transmittance. This solar glass can provide significant reductions in energy costs, and heating, ventilation, and air conditioning (HVAC) equipment expense. Solar glass also reduces harmful ultraviolet rays that can discolor fabrics and finishes, causing them to fade, so interior furnishings will look better over time.



The Light to Solar Gain (LSG) value of solar glass far outperforms high performance solar control Low-E glass, and clear insulating glass, at values of 2.14, 1.44 and 1.12 respectively. The higher the LSG value, the better the glass performs a transmitting daylight and reducing heat gain from the sun.

These qualities contribute to the sustainability of solar glass, from energy efficiency and maximizing the use of natural daylight to minimizing ultraviolet rays and enhancing occupant comfort.

Hurricane Impact-Resistant Glazing

Glazing has always been vulnerable to the high winds and flying debris that occur during hurricanes. High performance hurricane impact-resistant glass can withstand 140 miles pe hour (mph) winds, along with high-speed projectiles and debris, including design pressures in excess of 100 pounds per square foots (psf). These standards are tested and proven by independent laboratory results.

Hurricane impact resistant glazing meets the most stringent building codes for large glaze openings up to 50 sq. ft. in residential and commercial applications. This results in a aesthetic and functional design solution that provides peace of mind for owners and architects. ■

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The article continues online at ***http://www.archrecord.com/resources/conteduc/archives/0608building-1.asp***

To receive AIA/CES credit, you are required to read this additional text. The quiz questions below include information from this online reading.

AIA/ARCHITECTURAL RECORD **CONTINUING EDUCATION** Series

LEARNING OBJECTIVES

After reading this article, you should be able to:

- *Evaluate the latest materials, technology, architectural components, and related systems that comprise the building envelope.*
- *Identify performance characteristics and qualities that are important considerations during building envelope design, specification, and construction.*
- *Explain how to minimize risk and liability when approaching design, specification, and selection of building envelope products and systems.*
- *Analyze the sustainability benefits and attributes of various building envelope products, systems, and performance criteria.*

INSTRUCTIONS

Refer to the learning objectives above. Complete the questions below. Go to the self report form on page 212. Follow the reporting instructions, answer the test questions, and submit the form. Or use the Continuing Education self report form on *Record's* web site—*archrecord.construction.com*—to receive one AIA/CES Learning Unit including one hour of health safety welfare credit.

QUESTIONS

1. Thermal and moisture protection performance criteria are important to building envelope design because of all except which of the following?
   a. Leaks in an air or vapor barrier can be a potential source for moisture control failure.
   b. Many city, state, and national codes are requiring better thermal barriers within the building envelope
   c. Mold and health concerns are unrelated to thermal and moisture protection, and liability.
   d. Moisture can condense and remain in the wall cavity, creating an environment for mold to grow.

2. What are the three elements comprising point supported, bolted glass systems?
   a. Countersunk bolts, prefabricated trusses, mullions
   b. Storefront stainless steel frames, concealed bolts, tempered glass
   c. Heavy float glass, concealed hinges, aluminum space frames
   d. Structural supports, glass, and fittings

3. Attributes of composite mullion curtain wall systems include all except which of the following?
   a. Can only be inside-glazed under certain climate conditions
   b. Decreased field labor
   c. Better thermal performance
   d. Reduced glazing time

4. The Light to Solar Gain (LSG) value of solar glass outperforms high performance solar control Low-E glass and clear insulating glass.
   a. True
   b. False

5. Aluminum composite material with high strength organic fiber is designed to withstand which condition?
   a. Exploding vehicle bomb near large window expanses of a blast curtain wall
   b. Bullets and blasts originating within 30 feet of the building envelope
   c. Category 4 hurricane, wind speeds to 155 mph
   d. Category 3 hurricane, wind speeds to 130 mph

6. Which best describes the main function of aluminum composite material with high strength organic fiber?
   a. Bullet resistance for exterior cladding systems on buildings considered to be terrorist targets.
   b. Protect building facades from the impact of flying debris during hurricanes.
   c. Provide blast resistance protection from vehicular bombs outside a building.
   d. Allow large expanses of insulated or solar glass to be installed 30 feet above ground level.

7. Liquid applied flashing systems create a seamless condition because:
   a. The components form a chemical bond.
   b. The liquid is applied to a peel and stick membrane and then cures.
   c. The components form a mechanical bond.
   d. Only highly trained, certified laborers can install it.

8. Which of the following is *not* a factor that typically leads to greater liability and risk?
   a. Thermal performance and moisture control
   b. Different warranties from different manufacturers within a single system
   c. Multiple trades, contractors, materials and manufacturers on the jobsite
   d. One source for multi-component building envelope systems

9. Recent developments relating to point supported, bolted glass include all except which?
   a. Concealing countersunk bolts
   b. Increasing nickel sulfide content, to strengthen glass and reduce breakage
   c. Create safer heavy float glass through the heat soaking process
   d. Minimizing roller wave distortion

10. Which of the following statements is not true about insulated metal composite panels?
   a. When engineered for thermal performance and moisture control, they can reduce mold-related risks.
   b. Pre-fabricated panels typically reduce job site scrap.
   c. Approximately $3 billion in building mold related claims were paid in 2005.
   d. Reflective coatings for high solar reflectance on building envelope systems can lower building cooling costs.

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PRODUCT REVIEW

Vistawall

Vistawall introduces versatile Reliance™ curtain wall system, Terrell, TX-Vistawall Architectural Products recently introduced Reliance Curtain Wall, a new high-performance, pressure-equalized curtain wall system. The new zone-glazed system features outstanding water control and thermal performance.

Using the latest in trends in glazing, Reliance offers competitive pricing, labor saving and simplified installation. The system meets current specifications that require high-performance curtain wall and is ideal for low-rise, mid-rise and even high-rise buildings.

One of the greatest features of Reliance Curtain Wall is its versatility. It includes an integral anchor for sunshades, and photovoltaic cells can be integrated into Reliance. Vistawall also engineers a blast-resistant curtain wall using the Reliance system.

Reliance Wall is offered as 1-inch infill system, with snap-in adaptors for 1/4 -inch infill for spandrel applications, as well as complete 1/4 -inch infill systems.

Vistawall Architectural Products, a BlueScope Steel Company, is a leading supplier of architectural building products, including curtain wall systems, storefront and entrance systems and window systems. The company is a single-source supplier. Its capabilities include engineering, extrusion, fabrication, finishing and performance testing.
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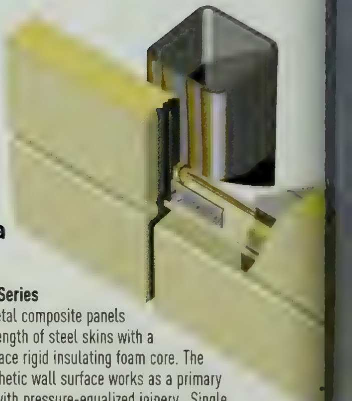

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Insulated metal composite panels offer the strength of steel skins with a foamed in place rigid insulating foam core. The exterior aesthetic wall surface works as a primary rain screen with pressure-equalized joinery. Single component rain screen construction provides a single source for all wall cavity components, eliminates trade jurisdiction problems and creates a solution for all climates.
CIRCLE 104

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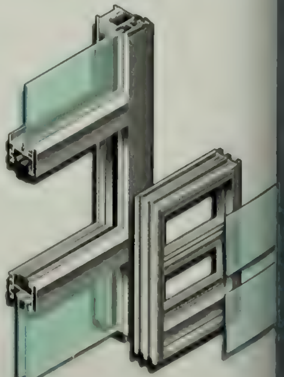


W&W GLASS

W&W Glass, LLC selected as glazing subcontractor for Julliard School of Music and Alice Tully Hall at Lincoln Center.
W&W has been awarded a design assist contract to provide structural glass walls, aluminum curtain walls and storefronts for the renovation and expansion of the Julliard School and Alice Tully Hall as part of the renovation of Lincoln Center in New York City.

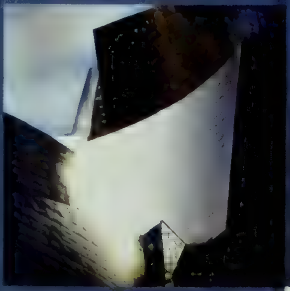
Highlighting W&W's work will be a 38' high cable net facade featuring 10,000 s.f. of the Pilkington Planar™ System with their proprietary "integral" fitting. In addition to the cable net, Pilkington will be providing a cantilevered glass fin system utilizing high performance Low E coated insulated glass.

The architects are Diller Scofidio + Renfro/FX Fowle.
Turner Construction is the construction manager.

Project completion is due mid-2008.
CIRCLE 101

N C A R B

DO YOUR DESIGNS PUSH THE BUILDING ENVELOPE?



Or do you take a more conservative approach?

The National Council of Architectural Registration Boards' monograph, *Building Envelope*, offers an overview of the design and construction of conventional building envelopes as well as a detailed introduction to the changing expectations of building envelopes and the factors that distinguish them. The course includes two case studies and an extensive resource listing.

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Lighting

From sleek Italian luminaires to improvised LED bubbles, pixels of light provide aesthetic punch

BRIEFS

Sustainable lighting design was honored on May 31 for the first time as part of the annual honors program presented by the International Association of Lighting Designers (IALD). **Renzo Piano's High Museum of Art** expansion in Atlanta [RECORD, November 2005, page 131], with lighting by Arup, garnered a top award of excellence, in addition to winning the sustainable prize. The IALD instituted the category in 2004, but this was the first year in which the judges felt an entry "met the qualitative needs of the visual environment with the least impact on the physical environment." Of the 23 projects recognized with awards this year, two projects merited awards in a new **residential lighting** category: The Briar Cliff Residence, in Kansas City, with lighting by Derek Porter Studio; and the Penthouse at the Four Seasons in San Francisco, with architectural illumination by H.E. Banks and Associates. For photos and descriptions of all the winning projects, go to www.iald.org.

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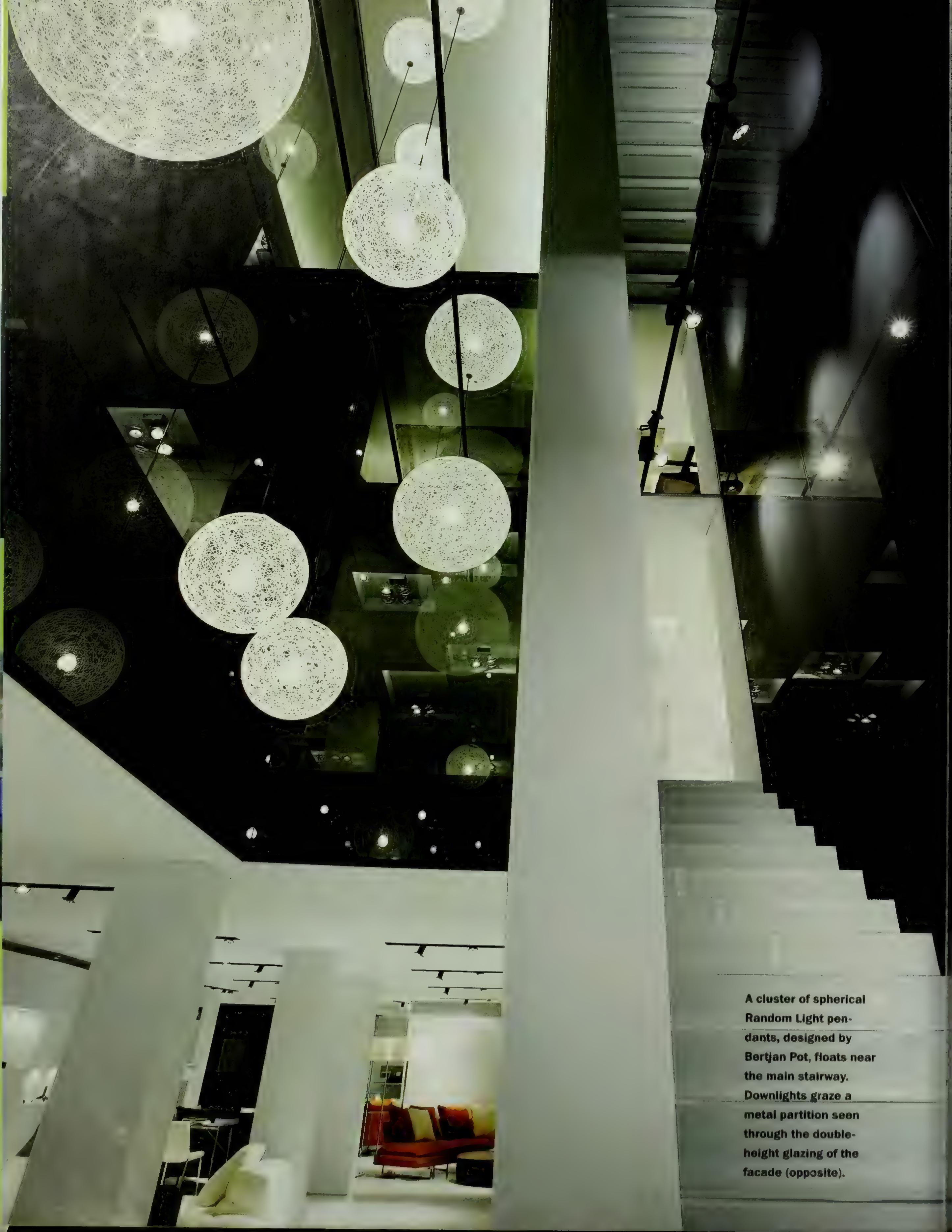
You may not have considered harnessing worm-eaten butternut wood as a filter for light. But for Boston's Diva Lounge, the young architecture firm Studio Luz recently fashioned reclaimed wood into banquettes, a bar, and a maître d' stand (below). Looming as a sculptural presence near the entrance, the stand sandwiches the porous wood veneer between sheets of laminated glass. Backlighting the structure with T5 fluorescents fitted with colored gels, the architects emphasize the organic nature of the wood and turn the scattering of holes into intriguing points of light.

The entire lounge, in fact, is enlivened by a similar improvisational approach to illumination. Partners Hansy Better Barraza and Anthony Piermarini wanted to create a luminous envelope for the nighttime bar and eatery. Assembling an armature of acrylic skylight domes to cover the walls and ceiling and backlighting them with colored LEDs, they created a custom effect on a budget from stock architectural materials. Each dome, or bubble, appears as a pixel of light mapping a sensory experience.

The Mixed Greens art gallery in Manhattan forgoes such colorful illumination, but employs a similarly monolithic lighting element. Tillotson Design Associates worked with architect Leven Betts Studio to mask mechanical ducts and pipes within the ceiling plane. Fluorescents set behind acrylic panels create an oversize light box that serves as a subdued canopy.

To orchestrate its new flagship furniture showroom in Barcelona, B&B Italia enlisted architects Patricia Urquiola and Martino Berghinz. Collaborating with the project design arm of the Italian lighting manufacturer Flos, the architects devised a ceiling plane that Urquiola also refers to as "a composition of pixels of light." Fixtures designed by Konstantin Grcic are set within rectangular coves that establish a visual rhythm overhead. The arrangement of the lighting was inspired by cutouts in a table Urquiola designed. Throughout the showroom, B&B Italia's first line of luminaires reveals its evolving role at the center of European design. *William Weathersby, Jr.*



A cluster of spherical Random Light pendants, designed by Bertjan Pot, floats near the main stairway. Downlights graze a metal partition seen through the double-height glazing of the facade (opposite).

Flos fulfills the luminous visions of Patricia Urquiola and Martino Berghinz at **B&B Italia** in Barcelona

y William Weathersby, Jr.

Since she founded her own multidiscipline studio in 2001, Spanish-born architect Patricia Urquiola has become a major force at the Milan Furniture Fair—the design star to atch. Each year she orchestrates trendsetting furniture nes for more than a half dozen leading manufacturers, addition to plotting multiple temporary installations nd showrooms. Expanding from her home base in ilan last spring, the prolific designer created a new agship in Barcelona for the furniture manufacturer &B Italia, for whom she has designed 11 series of tables nd chairs over the past 5 years. Working with her frequent collaborator architect Martino Berghinz, Urquiola as created a space with a polish that matches the precion of her industrial designs. The showroom's white one flooring, floating staircase, diamond-faceted walls, nd mirrored surfaces create a fluid backdrop for highyle, contemporary furniture.

For the lighting of the 1,800-square-foot showom, the architects collaborated with Flos, the Italian xture manufacturer that also operates a commercial ghting design consultancy. In addition to illumination for B&B showoms, the Flos team frequently collaborates with and works for the anufacturer's contract division that supplies furniture for hotels, restaunts, and offices.

"For the Barcelona showroom, the architects wanted crisp, flexle lighting that would make a strong impression without overpowering e bold lines of the furniture," says Luca Bolla, Flos designer in charge of e project. (He notes that Berghinz also has a particular affinity for archictural illumination, having designed fixtures for several manufacturers.) There are areas when the lighting fixtures intentionally become the focus f the customer's eye, and in other places you barely notice them," he otes. With so many white surfaces and a wealth of mirror and glass, it as also important to evenly light the space while carefully focusing the mps to avoid glare, Bolla adds.

As part of a recent expansion into lighting and accessories, B&B alia has introduced several lines of table and floor lamps created by enowned European designers, such as Ettore Sottsass and Jean-Marie assaud, that are showcased here. But the workhorses of the venue's dislay lighting are two highly tooled, low-voltage fixtures manufactured by los, their sleek profiles becoming a strong component of the overall aesetic effect.

Encompassing 1,800 square feet within a historic building that as previously rehabilitated by architect Carlos Ferrater, the Barcelona owroom is centrally located on Paseo de Gracia in the Eixample disict, a popular shopping destination for fashion and design. The new tore is a step in B&B Italia's corporate strategy to open single-brand stores in international cities; other locations with new flagships include Munich and Dubai.

In her furniture designs, Urquiola is best known for playful geometry: One new lounge chair's cover, supported by a painted or chrome-plated metal frame, is composed of triangular petals sewn together in combinations of felt, wool, and leather. The B&B Italia store is a similar assemblage of shapes. Rectangles, canted walls, and converging planes both reveal and shield sight lines.

Visitors enter through a double-height box of gray-frosted glass, which creates a prelude to the mostly white space. The two-story-high, street-facing window frames a towering screen made of two overlapping panels of metal fretwork, which serves as a backdrop for the main display area on the first floor. (Urquiola calls the screen "the chain-link fence," but it's more refined than that.) A grouping of Massaud's chrome-plated metal Delta floor lamps sits before a polished-plaster wall. Each lamp features a triangular shade with rounded corners that catches the eye with a shimmering surface—a combination of chrome-plated film and fabric. A display of the designer's Cubik lamps showcases each fixture's rectangular

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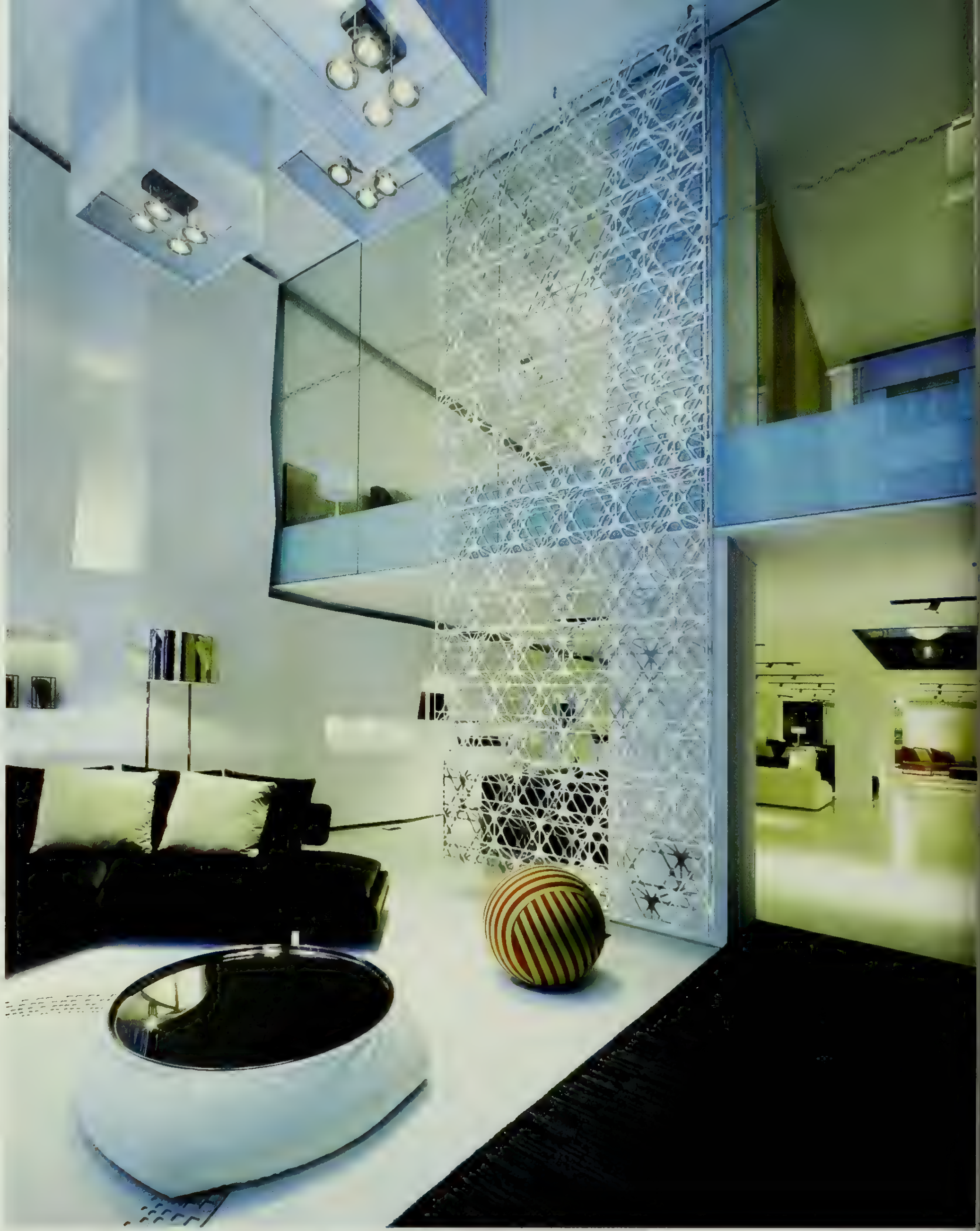
Project: *B&B Italia showroom, Barcelona*
Lighting designer: *Flos—Luca Bolla, principal designer*
Architects: *Martino Berghinz; Studio Urquiola—Patricia Urquiola, principal architect; Rodrigo Izquierdo, associate*
Architect of record: *Ramón Cortés*
Building architect: *Carlos Ferrater*
Project coordination: *B&B Italia research and development center, with Studio Collage*

Luminaires designed by Konstantin Grcic are set within "pixels" on the ceiling (right). Patricia Urquiola's modern spin on a Moroccan ottoman, called Fat Fat, sits in the foreground. The showroom also displays new floor and table lamps designed by international design stars, including Jean-Marie Massaud and Ettore Sottsass (below).



shade with a cloud pattern on a slender box frame of gun-metal-gray tubular steel. Atop a credenza, Sottsass's lamp, the Abat Jour, has a truncated cone base supporting a cylindrical shade of black glass.

Adjacent to the entrance, a floating staircase fabricated of solid, glossy white acrylic surfacing is framed by a cluster of pendants called Random Lights, designed by Bertjan Pot for the Dutch company Moooi. (B&B Italia took a 50 percent stake in Moooi last winter and is folding some of its lighting into B&B-branded showrooms.) In each fixture, white strands of epoxy-treated fiberglass surround a single incandescent bulb, floating like luminous, oversize balls of yarn. The underside of the staircase merges into a partial wall that does not meet the ground plane, an effect enhanced by downlighting on its underside.

The central architectural gesture of the store is the syncopation of the longitudinal wall that runs through the depth of the interior. The profile of the wall changes geometrically to appear like the facets of a diamond in some areas, while some canted planes pull away to create display

B O Y D

niches for accessories. The niches are illuminated by halogens fitted wit dichroic filters. Furniture is grouped in residential vignettes along th main axis of the space, inviting customers to move through it.

The ceiling plane integrates two different models of Flos ligh fixtures, both designed by Konstantin Grcic, himself a Milan Fair critic favorite whom the legendary industrial designer Achille Castiglioni calle his "spiritual heir" [RECORD, September 2002, page 364]. The configuration of the ceiling was inspired by Urquiola's occasional table, name Digitable, designed in 2005 for B&B Italia, which features rectangula cutouts in a black- or white-painted aluminum surface, in a random pattern that evokes old computer punch cards. Rectangular boxes—Urquiol calls them pixels—dot the showroom ceiling, each enclosing a Herz 2 fixture. Each downlight houses four low-voltage lamps that can be tightl focused on display areas. "By hiding the lights in openings following pixel-like pattern, the line of the ceiling is kept clean and a sense of heigh is added to the space," Urquiola says.

The luminaires were modified, with the length of the suppor bar shortened, in order to integrate the fittings inside the pixels. "A similar format was used to light the window displays, where the illuminatio levels needed to be more than the 500 lux of the ambient showroo lighting," Bolla says. To accent the window vignettes, five Herz fixture each house AR111, 75-watt halogen sources. An additional 10 Herz fixtures are equipped with CDM-R111 metal-halide lamps yielding a colo temperature of 3000K.

On the first level, in areas without double-height ceilings, 3 Magnum track lights from Flos house low-voltage, AR111, PAR20 lamp within polished aluminum casings. An additional 30 fixtures accommodate CDM-R111 metal halides for ambient lighting. Over the staircase, 1 Magnum track luminaires are also equipped with metal halides an focused at an angle of 40 degrees.

Throughout the showroom, the use of metal-halide lamp grants a high level of lumens per square foot with low energy consumption, while the halogen sources offer chromatic illumination that is close to the ambience of daylight, according to Bolla. Aiding an interplay o reflections, transparencies, and changing volumes within the showroom the lighting brightens B&B's Barcelona debut. ■

Throughout the showroom, Flos downlight units each feature four low-voltage lamps that can be tightly focused on furniture and accessories (above left and right). Illuminated with downlighting, a section of the wall beneath the staircase appears to float (below).

Sources

Recessed downlights, track lighting: *Flos*

Pendants: *Moooi*

Table and floor lamps: *B&B Italia*

Additional lighting: *Davide Groppi; Antares*

Solid surfacing: *LG HI-MACS*

For more information on this project, go to Lighting at **www.archrecord.com**.

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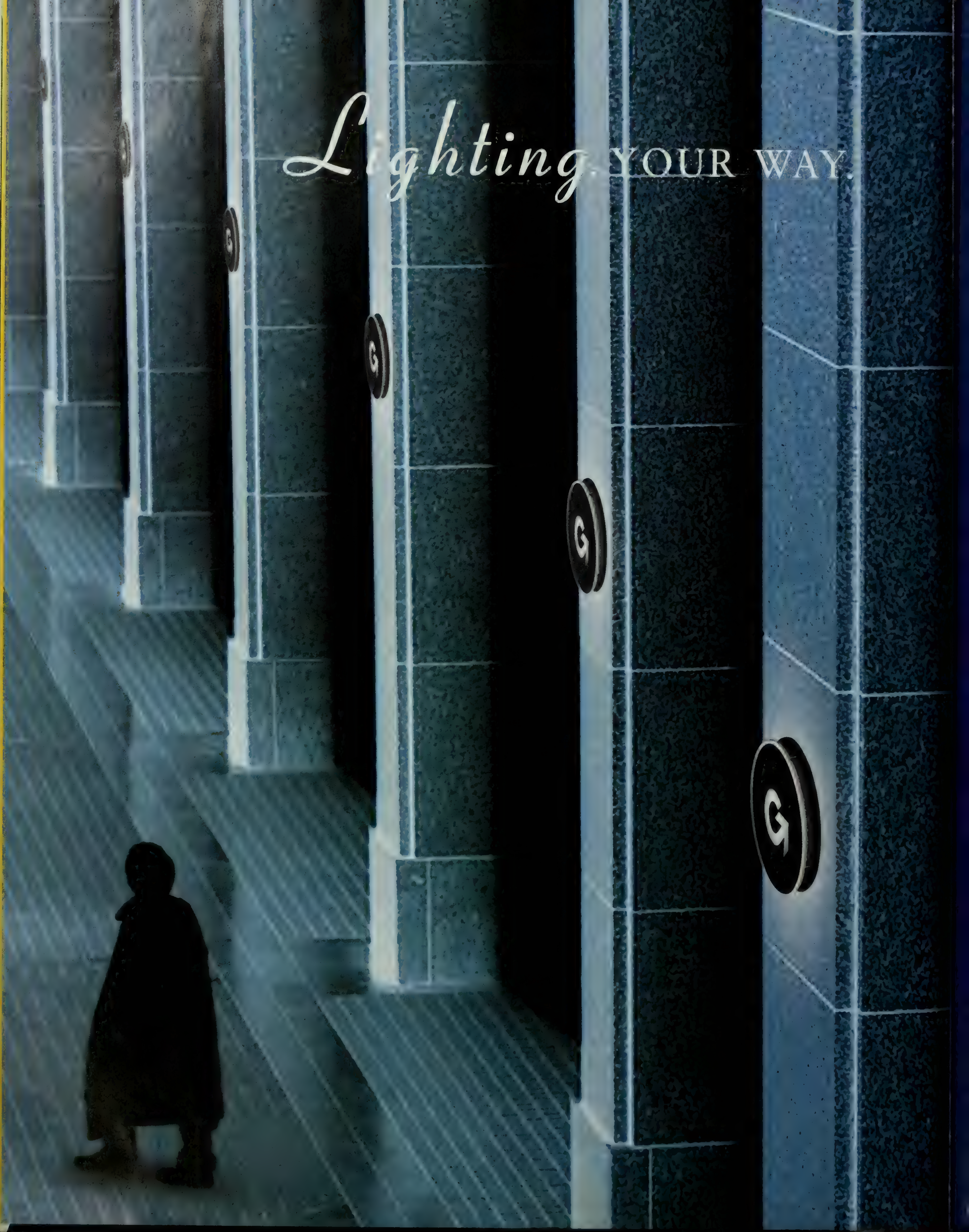
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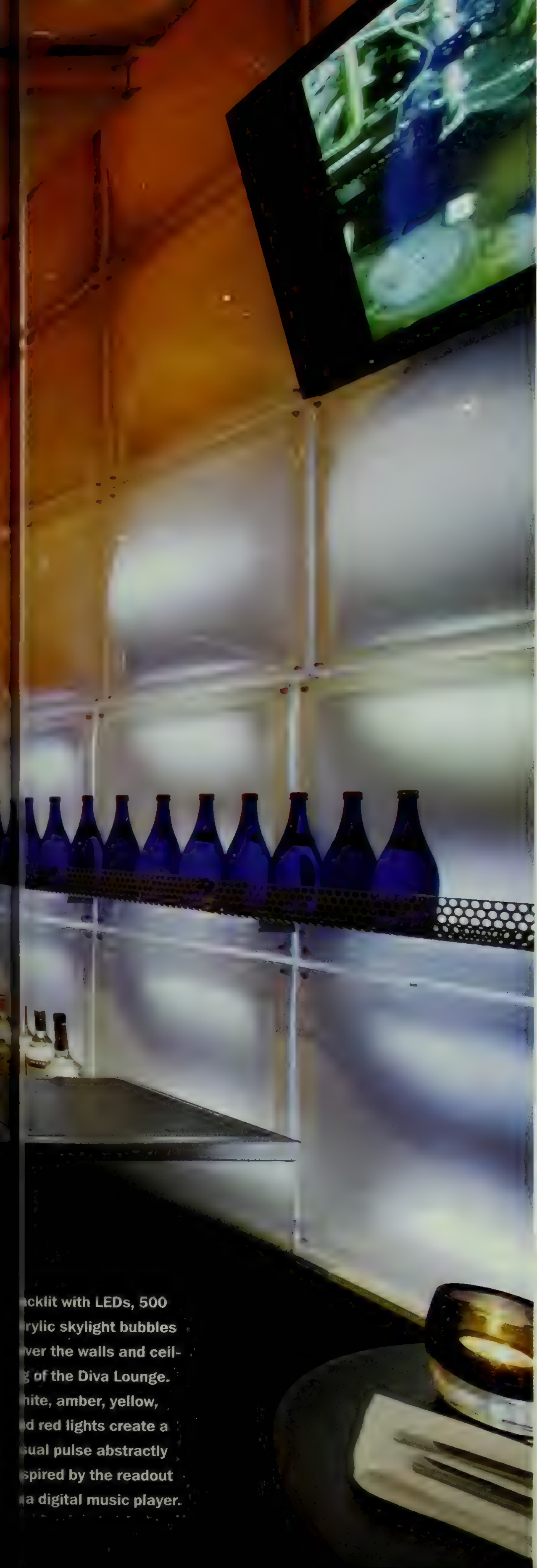

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PHOTOGRAPHY: © JOHN HORNER

Studio Luz orchestrates a landscape of LED bubbles for **Diva Lounge** in Boston

By William Weathersby, Jr.

Boston-based architects Hansy Better Barraza and Anthony Piermarini are intrigued by the way lighting can visually shape space. In fact, the name of the firm the husband-and-wife team founded in 2001, Studio Luz, incorporates the Spanish word for "light," reflecting their mutual obsession. As Barraza says, "Evocative lighting can heighten the sensuous aspects of an interior. We explore how the interplay of light, materials, and perspective can bring about a human connection to place."

Often the architects employ unorthodox lighting techniques, rather than install standard fixtures. For their recent design of the restaurant OmBar, in Boston, for example, they backlit shards of glass set behind resin to achieve a fractured composition of shadow and light. At Diva Lounge, which debuted outside the city, in Somerville, last spring, they further elevated lighting's role as a primary architectural element. Transforming a former grocery store in the Davis Square neighborhood into a nighttime lounge, the architects wrapped the entire space with a landscape of cloudlike lights. Patrons find themselves passing through zones of mysterious illumination that glow from white to red. The lighting creates an intimate enclosure where backlit occupants seem to be thrust to the foreground.

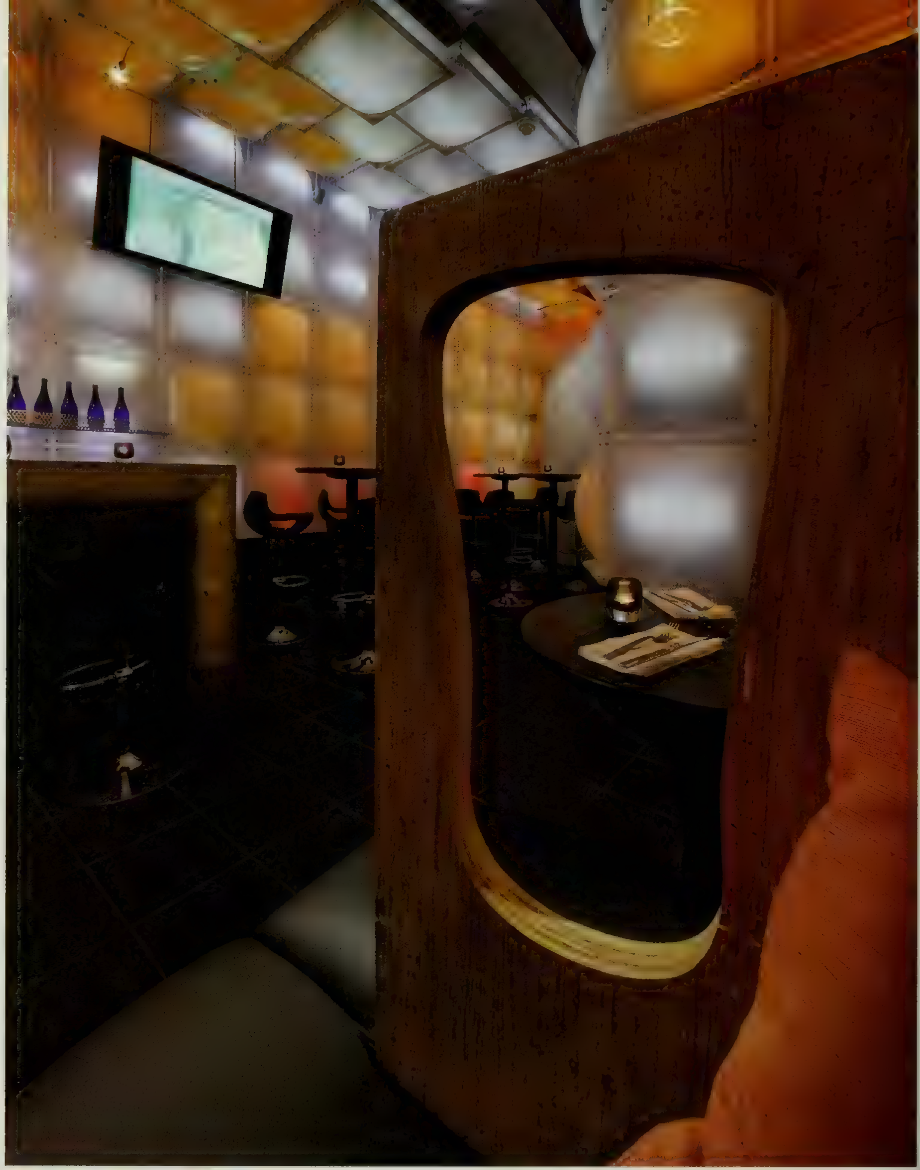
The 140-by-14-foot lounge was planned as an annex to Diva, the popular Indian restaurant next door. With 14-foot ceiling heights but few architectural details, the existing space called for a solution that could overcome the tunnel-like quality of the room. "We decided to create an architectural skin that 'blushes' with color, across billowing surfaces that introduce a sculptural effect," Barraza says.

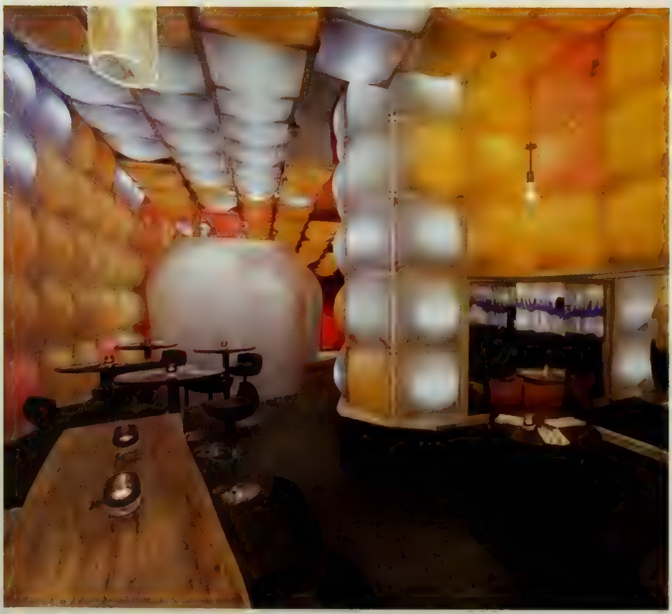
To create a syncopation of curved, illuminated surfaces along all the walls and the ceiling within a tight budget, the architects designed a metal framework to support 500 standard skylight domes, or bubbles, that act as translucent diffusers for LEDs set behind them. The architects enlisted technical consultant Daina Yurkus, principal of Light This!, to engineer and plot the lighting array.

The team specified four colors of low-voltage LEDs: white, amber, yellow, and red. Two strips of 24 LEDS are set behind each 24-inch square bubble. "The individual bubbles do not change color, but the arrangement of colors is abstractly based on the LED readout of a digital music player," Piermarini says. More intense colors, such as red and amber, are concentrated near more active areas, such as the center of the bar. Behind the bar, two rows of the bubbles are set into the wall to accommodate perforated metal shelving within the concave openings.

Project: *Diva Lounge, Somerville, Mass.*
Architect/lighting designer: *Studio Luz Architects—Hansy L. Better Barraza, Anthony J. Piermarini, AIA, principals; Michael Beaman, Jason Frantzen, Rachel Shauer, Shane Zhao, project team*
Consultants: *Light This!—Daina Yurkus, principal (technical lighting); Albert Costa Architect (codes)*
Engineers: *Ibrahim & Ibrahim Consulting Engineers (m/e/p); Zerounian Associates (structural)*
Contractor: *IDS Construction*

The warmth of salvaged butternut wood used to fabricate the bar and banquette dividers contrasts with the cool glow of the lighting units (right). Additional glass-shaded pendants enhance ambient lighting in seating areas (below). Toward the rear of the lounge, bathrooms are enclosed in pods whose tactile plaster surfacing was achieved via molds surfaced with waffled bed-foaming material.





The grid of bubbles also perforates the facade to create a convex, pixelated surface. Additional glass pendants housing MR16 lamps graze seating areas, while downlights between the ceiling framework add ambient light.

Contrasting with the luminous bubbles, furniture elements are fabricated from distressed wood salvaged from worm-eaten butternut forests in Vermont. The bar is a single log, hand-peeled and carved to reveal a pattern of the wormholes within. For the host stand, wood veneer set between sheets of laminated glass is backlit by color-gelled fluorescents; the form engages arriving customers with mystery. "We wanted to juxtapose the nonmateriality of the lighting bubbles with a very tactile, almost coarse material," Barrata says. The spongelike pattern of holes within the wood are as organic as the light bubbles are otherworldly. ■

Sources

Low-voltage LEDs: *ElectraLED*

Bubbles: *American Skylight*

Mounting brackets: *Quality Metal Craft*

Polycarbonate panels: *Sheffield Plastics*

Pendant downlights: *Illuminating Experiences*

Accent spotlights and tracks: *Tech Lighting*

For more information on this project, go to Lighting at **www.archrecord.com**.

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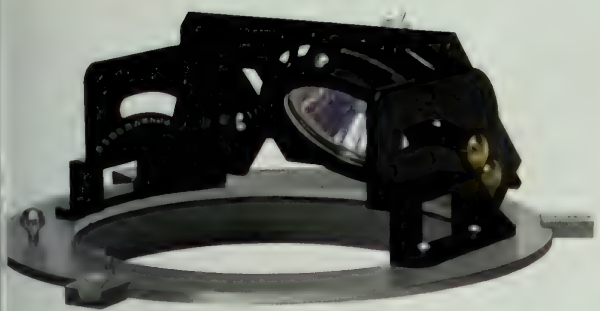

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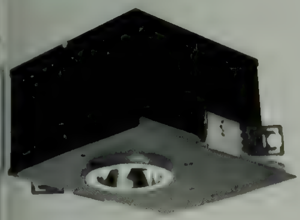

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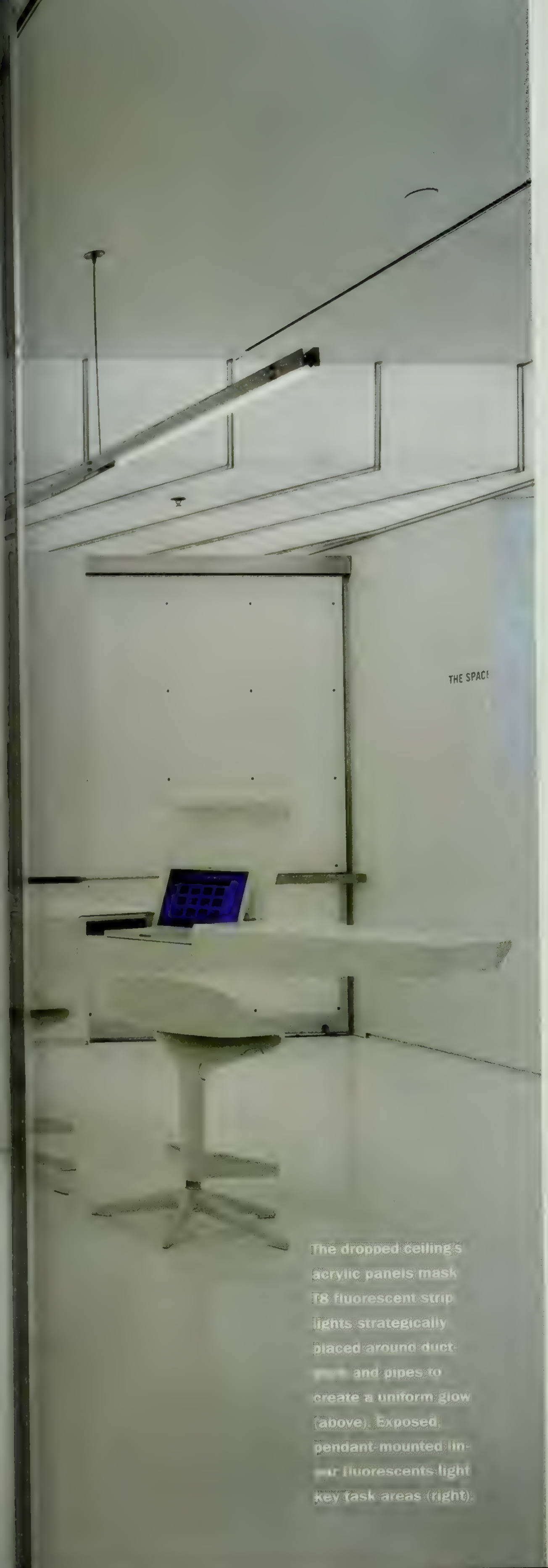


The dropped ceiling's acrylic panels mask T8 fluorescent strip lights strategically placed around ductwork and pipes to create a uniform glow (above). Exposed, pendant-mounted linear fluorescents light key task areas (right).

Tillotson Design Associates wraps the **Mixed Greens** art gallery with white light

By Leanne French

The Mixed Greens gallery aims to counter the often-rarefied trappings of the contemporary art world. Launched in 1999 as an online operation and later expanded to a bricks-and-mortar gallery in New York City's Chelsea district, the business was founded with the philosophy that "great, affordable art should be part of everyone's life," says owner Paige West. This egalitarian approach extends to its new location on West 26th Street, a 3,500-square-foot, white-on-white landscape set beneath a luminous fluorescent ceiling that emphasizes the art on display.

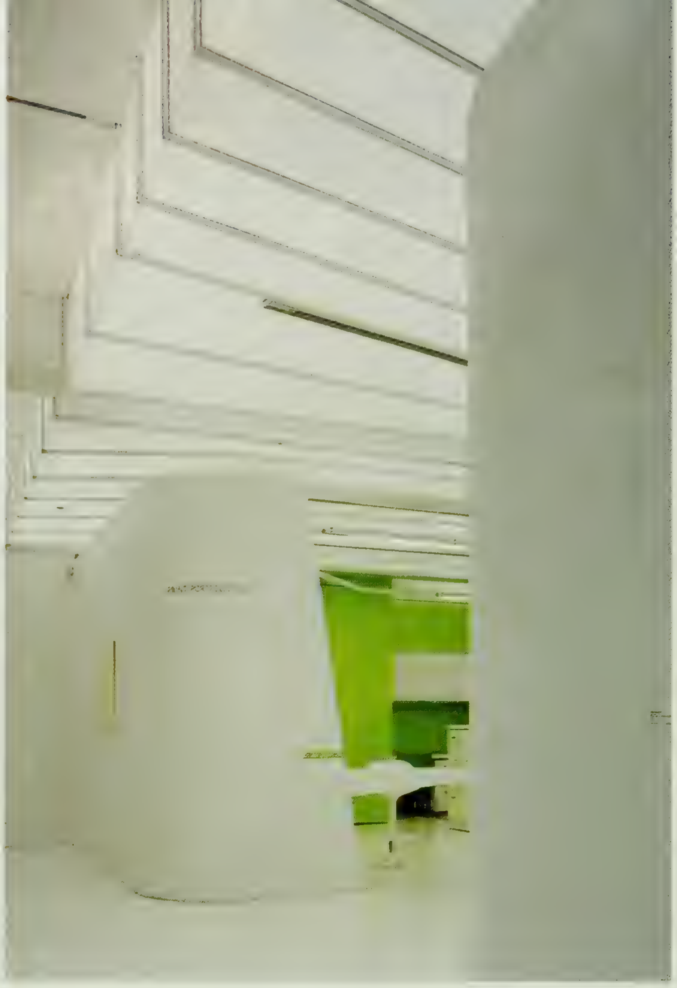
Architects David Leven and Stella Betts, principals of Leven Betts Studio, allowed the challenging conditions of the gallery's existing raw space to dictate the renovation. A deep central beam and five irregularly spaced columns led the architects to create a custom dropped ceiling as a unifying element. Clad with translucent acrylic panels, the ceiling houses lighting, HVAC, and sprinkler systems. Supported by flat, mill-finish aluminum bars, the monolithic structure also serves as a visual cue that draws visitors through the two main display areas.

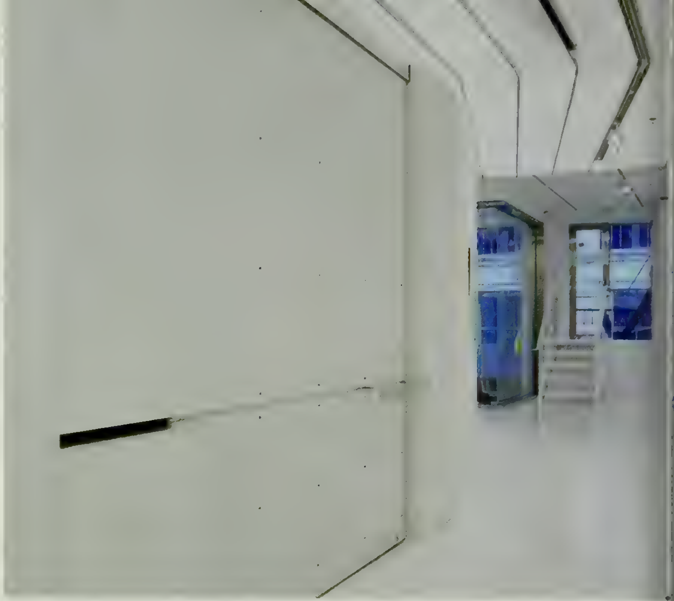
Lighting designer Suzan Tillotson, principal of Tillotson Design Associates, orchestrated the ceiling's luminous glow. The client was initially opposed to fluorescent lighting, fearing it would be too harsh, so Tillotson created a lighting mock-up to compare three sources set behind

PHOTOGRAPHY: © MICHAEL MORAN

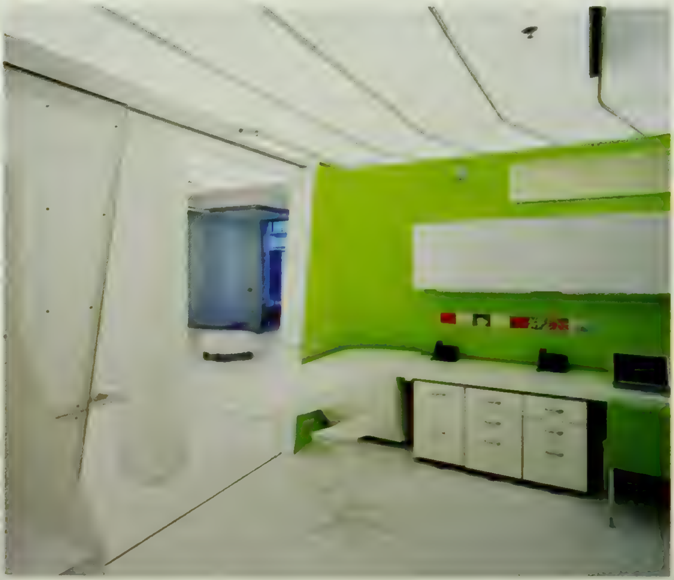
Leanne French is a freelance writer based in New York City. She is a frequent contributor to the RECORD *lighting and interiors sections.*

Project: *Mixed Greens, New York City*
Lighting designer: *Tillotson Design Associates—Suzan Tillotson, principal designer; Shiri Cnaani, Greg Emetez, project team*
Architect: *Leven Betts Studio—David Leven, Stella Betts, principal architects; Tim Furzer, Jonathan Man, associates*
Interior designer: *Ghislaine Vinas Interior Design*
Contractor: *Taocon*





The spacing of the ceiling's flat aluminum support bars varies to establish a strong directional pull from the front to the back of the gallery (above left and right). Sculptural dividers and furnishings are lit by the canopy and exposed fluorescents (below).



acrylic: incandescents, dimmable 3000K fluorescents, and warmer 2700K fluorescents. "After the client saw the three options, she chose the 3000K fluorescents," Tillotson says. "Our challenge was to translate the mock-up to a larger scale, and make the lighting set off the art without the gallery seeming too cool or 'surgery-suite' sterile."

Tandem-mounted, T8 fluorescent strip lights were carefully placed to eliminate shadows from the ductwork and pipes, ensuring a uniformity of illumination across the ceiling plane. The design team optimized the plenum depth at 16 inches to create a consistent surface and a comfortable finished-ceiling height. The ambient glow of the translucent canopy compensates for a lack of natural light, which was sacrificed when windows were covered to accommodate additional wall displays. To further accent the art, additional downlights attach to ceiling tracks.

The ambience of the space was intended to be more casual than most galleries. "The client wanted to celebrate the office in the middle of the space and make it more accessible for clients," says Betts. "At exhibition openings, the experience is more fun and loungelike."

Inspired by the structure of airplane wings and sci-fi imagery ("We looked at George Lucas's film *THX 1138*, a movie with a palette that was completely whited out," says Leven), the architects designed a custom reception desk, a bar, and a pivoting media table that features built-in laptops where visitors can view the gallery's archived collection. The furniture clads inner steel-tube structures with aluminum panels. Accent lights can be ceiling-mounted on extensions to downlight key furniture pieces. Exposed, pendant-mounted fluorescent lamps with rear sockets also appear to float below the ceiling above the bar and pivoting table, while halogen wall washers illuminate key areas throughout the space. In the office and storage areas—and inside cabinets—the architects worked with interior designer Ghislaine Vinas to punctuate the white-on-white color scheme with swaths of green, a nod to the gallery's name.

At night, interior lighting viewed from the street substitutes for signage. Gelled T5 fluorescent strip lights and a Mylar scrim set between the drywall and three front windows cast an outward green glow. The subtle stroke of illumination along the multitenant building's facade quirkily invites passersby to enter and explore the art that awaits inside. ■

Sources

Fluorescent strip lights: *Bartco*
Incandescent track lights: *Capri*
Exposed fluorescents: *Nippo*

For more information on this project, go to Lighting at **www.archrecord.com.**

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Lighting Products

◄ Spheres of light and shadow

Intended for hospitality and residential interiors, the Farinelli chandeliers and sconces are the latest addition to Boyd Lighting's Kentfield Collection division. Designed by Bentivolgio/Heefner, the fixtures feature hand-sculpted woven spheres that float above the light source, diffusing the light into shadowy patterns on the wall and ceiling. The curving brass arms, with brass or nickel finish, are topped with white glass tulip-shaped shades. The chandelier's curvilinear form is repeated in a single arm wall sconce. The series is available in finishes of satin nickel, satin brass, and blackened brass, while the woven sphere is finished in polished nickel. Halogen lamping and mouth-blown, cased white Italian glass are standard. For more understated interiors, the fixtures are available without the spheres. Boyd Lighting, San Francisco. www.kentfieldcollection.com **CIRCLE 202**

Illuminating ceiling fan

opeller is a new ceiling fan created by Israeli designer Yaacov ıufman for the serien.lighting collection. The fan's "blades" are ade of a translucent synthetic white fabric stretched over a re frame. According to the manufacturer, the blades can easily removed to change the lamp (one 150-watt halogen bulb) or move the fabric for cleaning. The strength of the illumination and e rotor speed (60, 120, 180 rpms) can be set and controlled dependently of each other by IR remote control with various ttings. There is also a rightward/leftward running motor for sumer and winter operation. Propeller has a wing span of 39" and mes in approximately 17", 25", and 32½" lengths. The fixture is rrently available in the U.S. through Plug Lighting in Los Angeles. rien.lighting, Rodgau, Germany. www.serien.com **CIRCLE 203**

◄ Skinny lighting options

HessAmerica had several strong introductions this year, including the Ledia and Night Elements fixtures. Ledia LED illuminated embedded glass tile and strip lighting (far left) is appropriate for indoor, outdoor, and underwater use. Designed by German architect Karsten Winkels, Ledia recesses into paver stones, concrete walkways, patios, reflecting ponds, corridors, and the like, across a scale of municipal and upscale residential applications. Night Elements (near left) are multifunctional columnar luminaires in modular sections for outdoor area, site, and landscape lighting. The unobtrusive poles offer combinations of upward, downward, and laterally aimed lighting for area, accent, walkway, and landscape illumination, as well as zone definition. Modules can be configured from ground-mounted beacons and bollards up to columns 18' in height. Night Elements features cast-aluminum housings and extension modules in extruded aluminum: Standard colors are natural aluminum, matte silver-gray metallic, or graphite gray. Illumination is provided by a choice of metal-halide or fluorescent lamps for crisp, white light. HessAmerica, Gaffney, S.C. www.hessamerica.com **CIRCLE 204**

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Walt Disney Concert Hall in Los Angeles is illuminated with Invue Vision Flood. Lighting design by Kinetic Lighting; Photo courtesy of Line 8 Photography.

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Lighting Products

◄ New design takes flight

L'ale is Ivalo Lighting's newest fixture family. The first piece in the line is an indirect/direct pendant designed by William Pedersen, FAIA, of Kohn Pedersen Fox. Resembling a spaceship model, the fixture features a 4'8" long shell that ranges in width from 11" in the center to 5" at the tips and includes a removable acrylic lens. The elegant power and support I-wire cable system comes 12' and 16' standard lengths. Ivalo Lighting, Coopersburg, Pa. www.ivalolighting.com **CIRCLE 205**

◄ Overbed health-care family

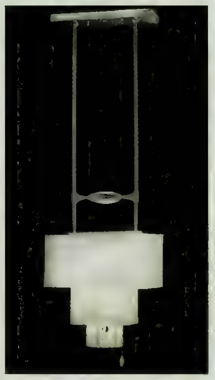
Patientlite is a multifunctional family of direct/indirect T5 fluorescent overbed lights for patient rooms in a range of health-care and institutional facilities. The housings are manufactured from extruded aluminum with heavy-duty die-cast aluminum end plates. The fixture's break-resistant polycarbonate lenses are flexible, nonyellowing, and chemical-resistant for the life of the fixture. A seam-free top and clean edges eliminate dust traps. Luxo, Elmsford, N.Y. www.luxous.com **CIRCLE 208**

LED mixing chamber

o solid-state lighting uses an integrating amber to mix and blend LED light into e smooth, blended light source without riations or pixelation. The line is currently ailable in interior downlights and cessed or surface-mount linear configurations. Renaissance Lighting, Herndon, Va. ww.renaissancelighting.com **CIRCLE 206**

► Light projector

When illuminated, the inner porcelain shades of the Clair De Lune Collection, adorned with a carved design, project the reflection of the pattern onto outer fabric shades. Intended for high-end residential and hospitality interiors, the Clair De Lune family of fixtures includes a flush-mount and semiflush-mount ceiling light, a four-light chandelier, three-light and two-light island fixtures, a wall sconce, and a single-light pendant in two sizes. The larger of the two single-light pendants (right) measures 14" wide x 16" high and uses one 150-watt bulb. All hardware is in a satin nickel finish. Stylicon, Louisville. www.stylicon.com **CIRCLE 207**



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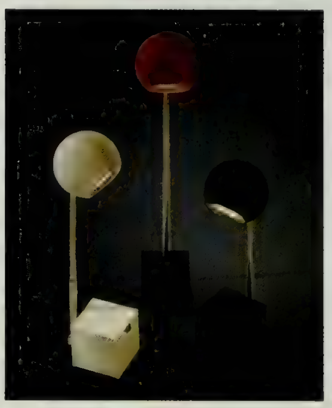
Lighting Products

◄ Ultra-bright LEDs

At the 2006 Light+Building show in Frankfurt, Germany, Lamina Ceramics introduced Atlas, a new line of ultra-bright LED light engines, including a warm white model designed to replace halogen and tungsten filament competitors and a powerful "daylight white" model designed to replace flourescents. The new line also features an RGB LED light engine generating any of 16 million blendable colors, including white. Lamina Ceramics, Westampton, N.J. www.laminaceramics.com **CIRCLE 210**

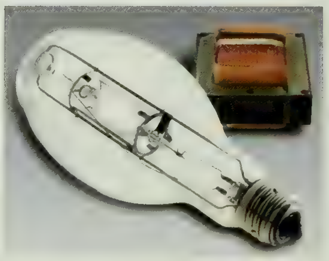


◄ Taking on the task

Lightolier has introduced a line of specification-grade task lighting to address the visual needs of an aging workforce. The new line includes adjustable arm task lights, undercabinet lighting, and portabl ambient lighting fixtures. Table base, floor stand, panel, and binder bin mounting options are available. Adjustable arm task lights are spring-balanced and feature parallel motion, keeping lamp heads at the optimum angle as the arm positions are changed. The fixtures incorporate energy-saving 13-watt compact fluorescent, LED, or T5HO lamps (halogens are also an option). Adjustable arm task lights come with a variety of head shapes such as the 1960s retro globe shades above. Lightolier, Fall River, Mass. www.lightolier.com **CIRCLE 212**

► Natural light in a bulb

The Natural White pulse-start metal-halide lamp and ballast system features a high color rendering index (CRI) of 90+. The lamp is intended to replicate natural daylight in applications including retail, lobby, and roadway lighting. Venture Lighting, Solon, Ohio. www.venturelighting.com **CIRCLE 209**



► Spotlight on recent history

The Leucos Historic Collection includes fixtures popular in the 1960s and '70s suited for contemporary settings. Leucos's first design, the Gill wall sconce and ceiling fixture (right), features handblown crystal glass surrounded by a white circular detail across the glass front. Leucos USA, Edison, N.J. www.leucos.com **CIRCLE 211**

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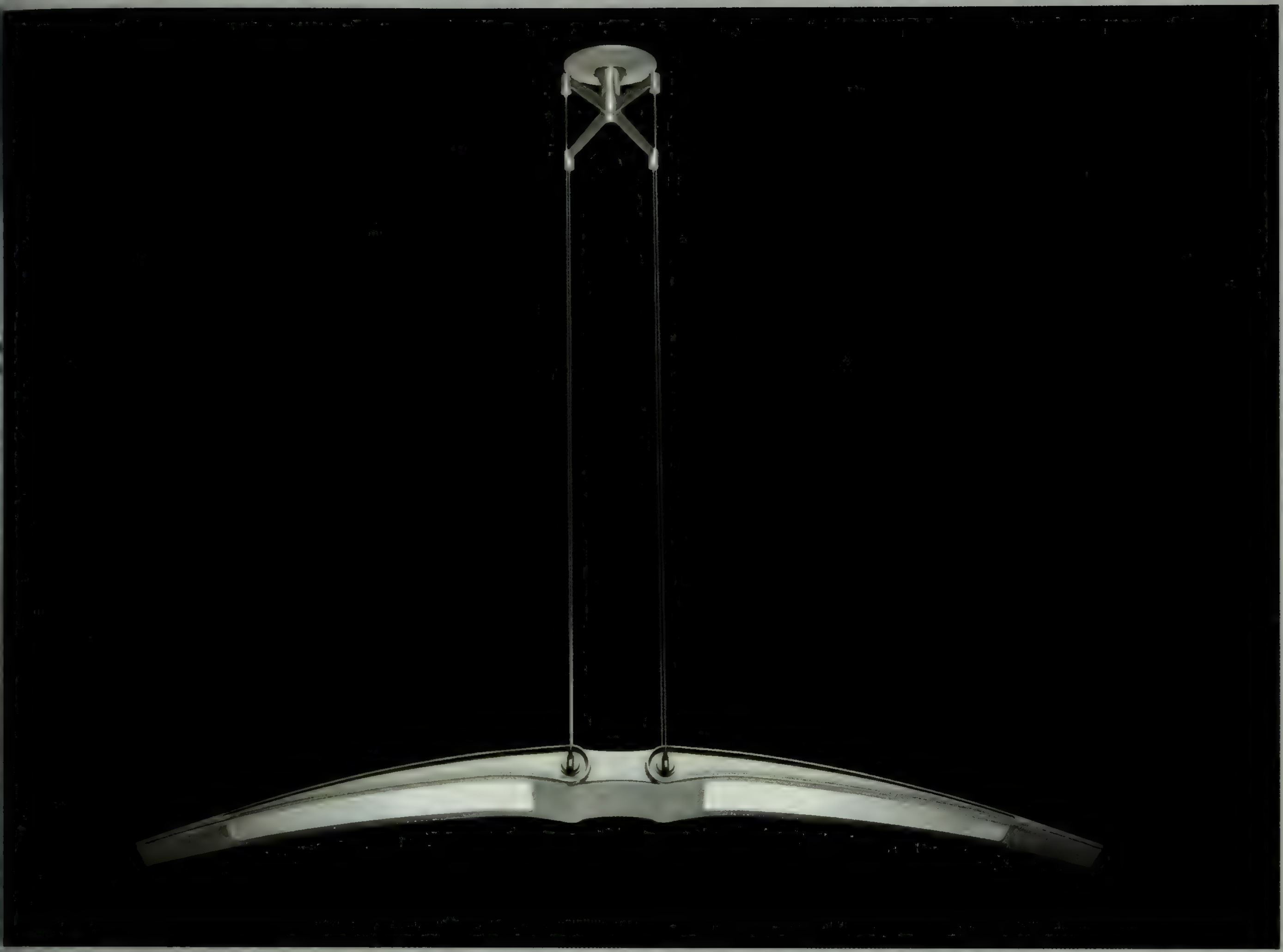

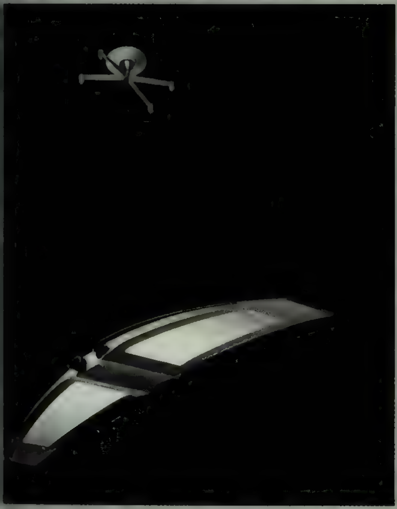

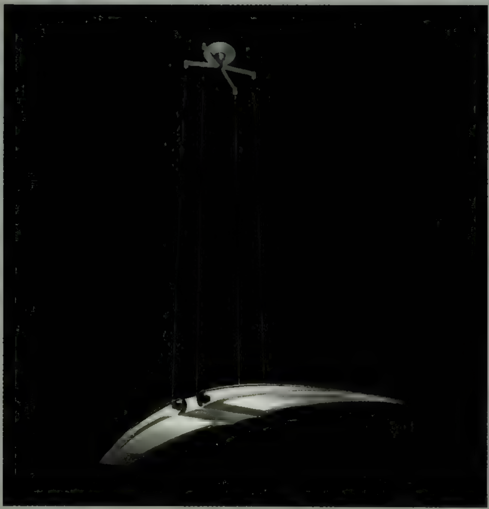

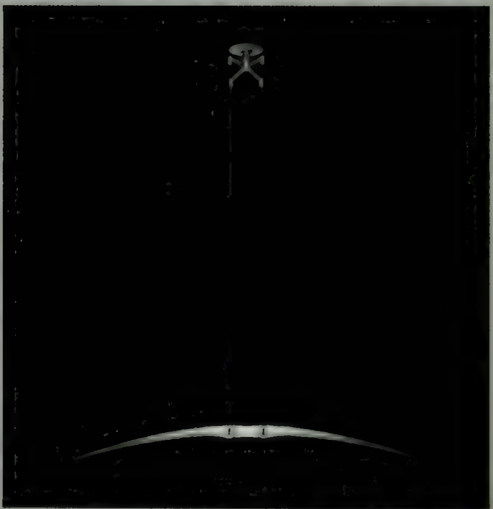

ale

Lighting fixture designed by William Pedersen

A 4'8" long, compact fluorescent pendant designed to be used singly or in multiples at the same or varying heights. Dimmable indirect/direct with slender line voltage suspension/power cable.

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Download your submission form now at the Call for Entries section at www.archrecord.com. If you have any questions, please e-mail Rita Catinella Orrell at rita_catinella@mcgraw-hill.com. E-mailed submissions will not be accepted.

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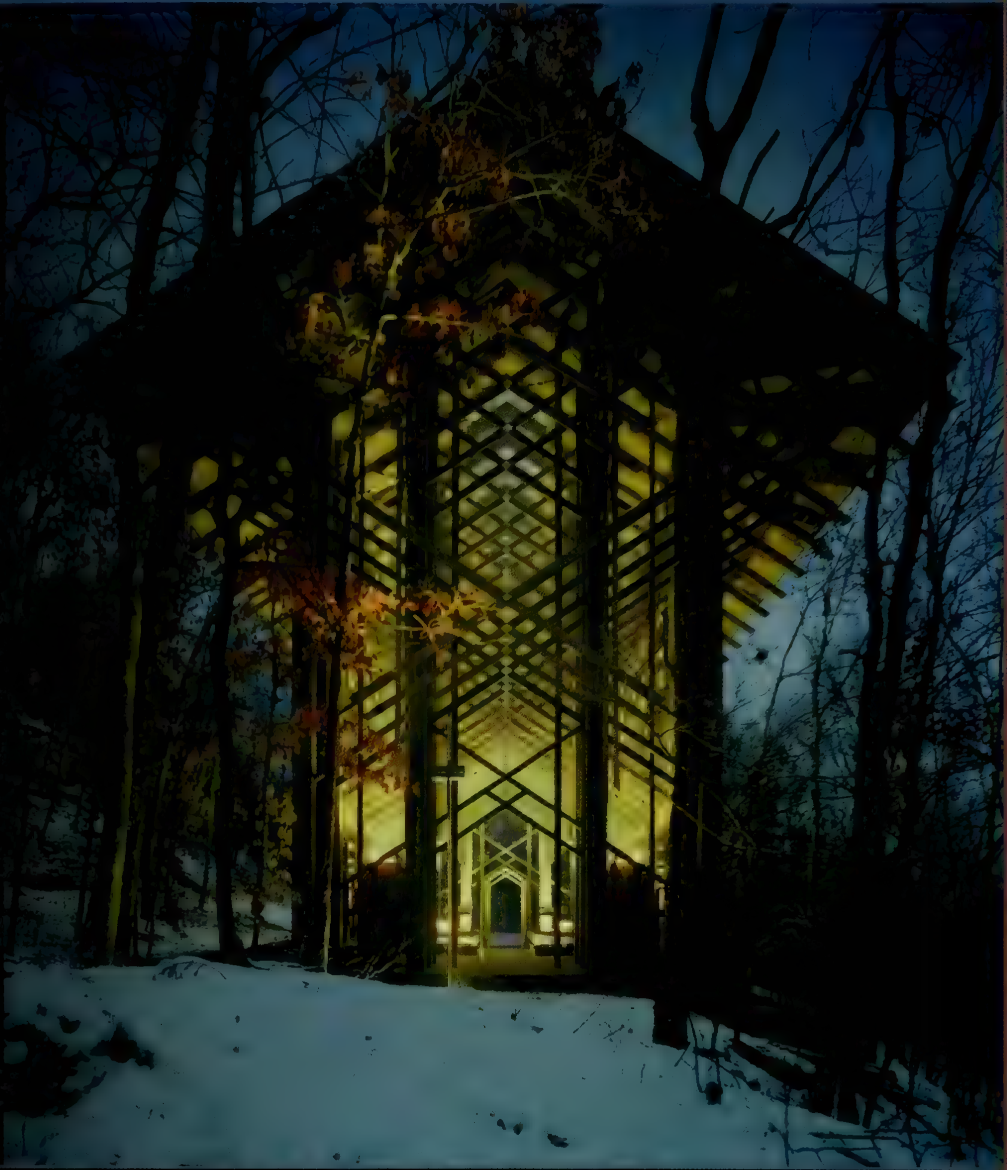

Thorncrown Chapel, Eureka Springs, Arkansas | AIA 2006 Twenty-five Year Honor Award | architect: E. Fay Jones, FAIA | photograph by Greg Hursley

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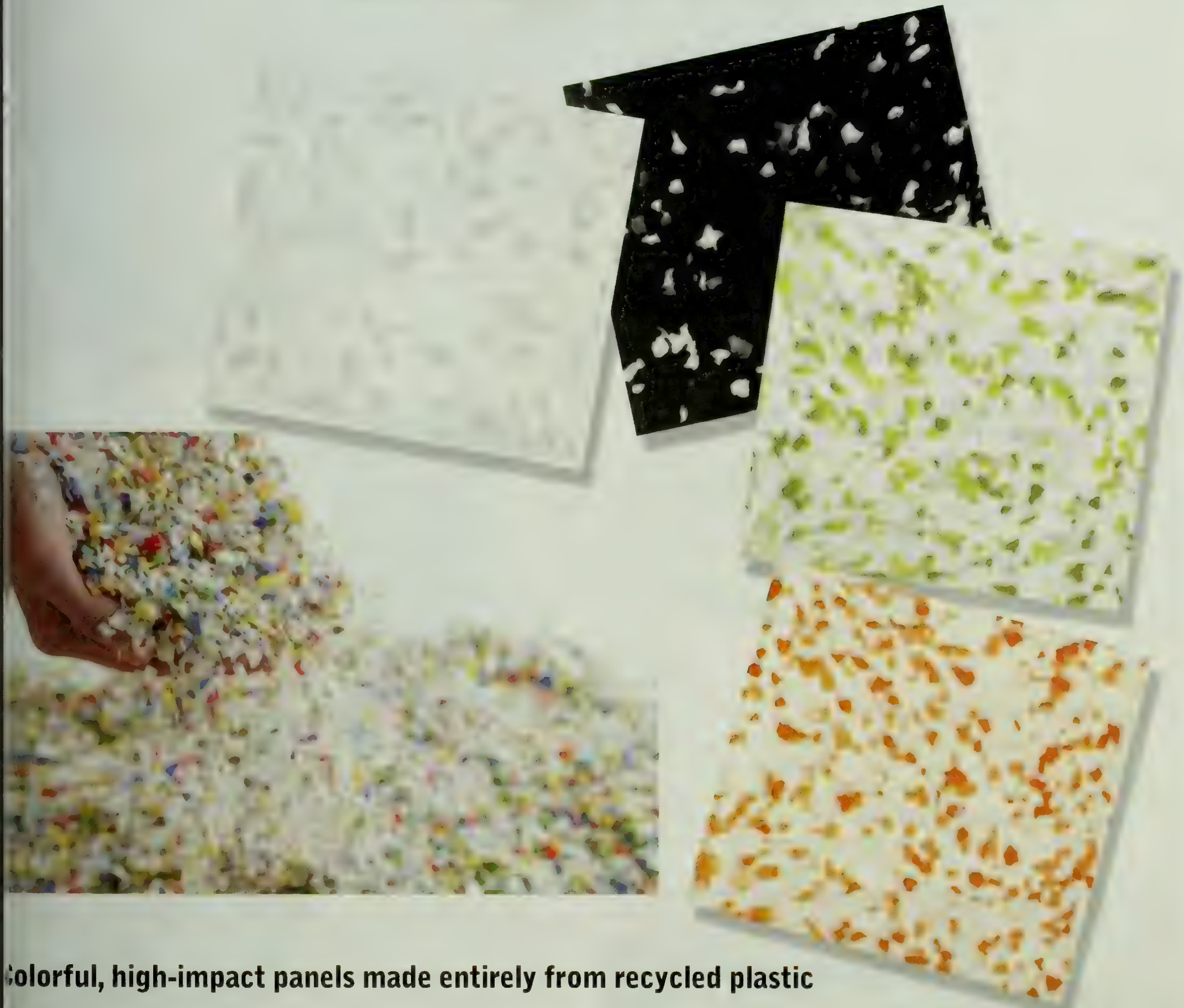
Products

Green Options

This month's focus is on new solutions for designing sustainable buildings—from an **energy-saving air-conditioning** system to good-looking OSB panels. To scout out the latest environmentally friendly products, visit the **USGBC's GreenBuild show** to be held this year from 11/15 to 11/17 in Denver. *Rita Catinella Orrell*



olorful, high-impact panels made entirely from recycled plastic

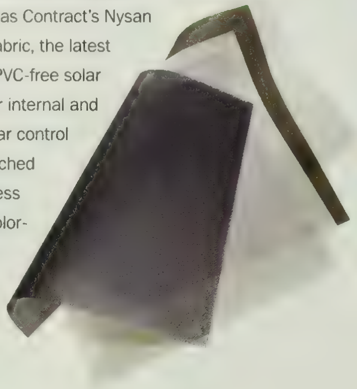
is year, along with many other eco-endly resin additions, 3form introduced 0 Percent, a new sustainable material fering made entirely from postconsumer-cycled high-density polyethylene DPE). HDPE is typically generated m recycled bottles used for detergent, ampoo, milk, and cosmetics. 3form rked with a recycling partner to devise state-of-the-art sorting and cleaning chnology to sort the waste by color d then arrange a confettilike sprinkling of compressed color particles into artful combinations within the panels. The company's own 240 member workforce at its Salt Lake City facility contributes to the recycling effort, even bringing in discards from their homes that are regularly shipped to the recycler in Alabama. 100 Percent panels are UV stable, offer chemical-resistance, and are suited for high-impact environments, such as restroom partitions, education and health-care facilities, as well as outdoor applications. Initially, 100 Percent is available in four colorways in 4' x 8' sheets that are 1" thick. Color patterns can be varied according to the needs of the specifier, depending on the availability of specific recycled content. 3form, Salt Lake City. www.3-form.com CIRCLE 212

Clockwise from bottom left: Confettilike recycled particles; 100 Percent panels in a range of colors; examples of recyclable bottles.

Product Green Options

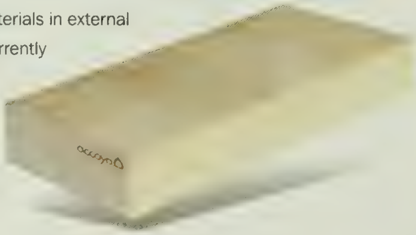
► Latest addition to solar control family

At last year's GreenBuild, Hunter Douglas Contract's Nysan division introduced GreenScreen Eco fabric, the latest addition to the GreenScreen family of PVC-free solar shading fabrics designed exclusively for internal and external contract roller shades and solar control systems. The fabric is made of prestretched polyester available in 3 percent openness and five colorways. Customized dual coloring allows for a greater level of heat control, glare reduction, and outward visibility. Hunter Douglas Contract, Upper Saddle River, N.J. www.hunterdouglascontract.com **CIRCLE 213**



► Sustainable "new wood species"

Accoya, from U.K.-based Titan Wood, is produced using a patented acetylation process that converts sustainably forested softwoods and nondurable hardwoods into a modified wood product that offers durability, dimensional stability, and a nontoxic, 100 percent recyclable alternative to tropical hardwoods, biocide-treated woods, and artificial materials in external applications. The company is currently negotiating overseas distribution rights and expects Accoya to be available in the U.S. next year. Titan Wood, Earlston, U.K. www.titanwood.com **CIRCLE 215**



▼ Easy to install green roof system

GreenGrid, a division of Weston Solutions, introduces a new DIY Green Roofing System ideal for homes or smaller commercial buildings. The GreenGrid DIY Kit includes 2' x 2' x 4" modules, GreenGrid's specially formulated lightweight soil media, and low-maintenance, drought-resistant sedum plants. After the soil media and plants are placed in the modules, the units can be installed directly on top of the existing roof. Although the system is light, the roof's structural integrity may need to be tested to verify that it can support the extra weight. Weston Solutions, Chicago. www.greengridroofs.com **CIRCLE 217**

▲ Chilling out overnight

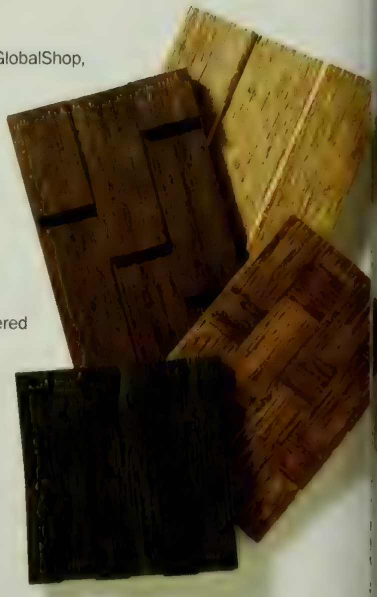
Last June, New York State and County officials presented Morgan Stanley with a ceremonial incentive check for $300,000 for installing the Metropolitan area's largest ice-storage-based air-conditioning system at its Purchase facility. The system, provided by Trane, makes ice at night during off-peak hours to provide cooling the next day during on-peak hours. The system is expected to lower the facility's peak energy usage by 740 kw, reduce overall electric usage by 900,000 kwh, and reduce the site's overall fuel consumption by 15,000 MBtu. Trane, Long Island City, N.Y. www.tranenewyork.com **CIRCLE 214**

◄ Reducing odor and VOCs

Sherwin-Williams's new ProGreen 200 (left) is a competitively priced, low-odor, low-VOC paint that exceeds Green Seal's GS-11 standards for paints. At 50 grams per liter VOC, the product complies with environmental regulations and is ideal for new commercial construction. Another low-odor introduction is Sherwin Williams's Harmony Interior Latex line, which offers zero VOCs and antimicrobial properties. Sherwin-Williams, Berea, Ohio. www.sherwin-williams.com **CIRCLE 216**

► OSB panels with style

Taking home Best Overall product at GlobalShop, the nation's largest retail trade show, Ecotextures architectural panels are crafted from environmentally friendly OSB products. Certified, rapidly renewable timber is used to create a durable, shrink-resistant material ideal for millwork, feature walls, column covers, fixtures, and furniture. Ecotextures are engineered in varying panel sizes in four patterns that interlock for a seamless finish. Four colors are offered in addition to a natural unfinished surface that can be stained on-site. No urea-formaldehydes are used in the panel production. Architectural Systems, New York City. www.archsystems.com **CIRCLE 218**



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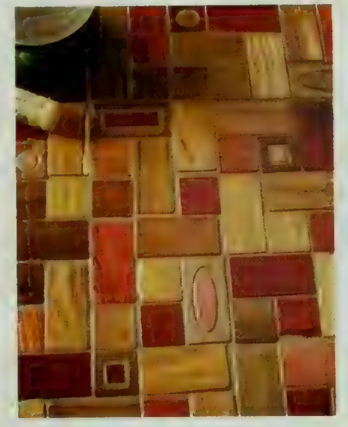
Product Briefs

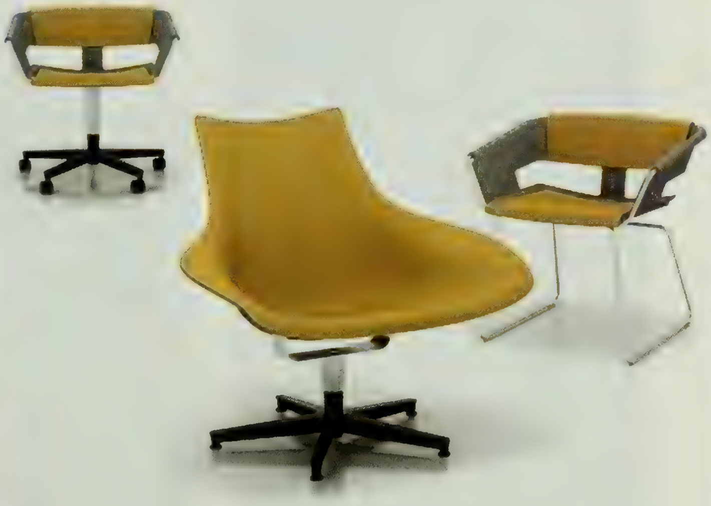
NeoCon Review

The 38th annual NeoCon trade show for contract interiors, held last June in Chicago, hosted more than 50,000 attendees in 1.2 million square feet of exhibition space. Here are a few outstanding introductions. *Rita Catinella Orrell*

Naturally strong and beautiful

e Lineage collection of stainless-steel and bronze tiles from Flux Studios have a living ish; no coatings or chemical patinas are applied over the metal. Patterns in the line clude an hourglass and blank tile (bottom left). Flux Studios also recycles wood from stainably harvested and plantation grown lumber too small to be used for fine-rniture making to create their line of solid bamboo, teak, and rosewood tiles (bottom ht, shown with tile inserts). Fortis Arbor Grout was developed specifically to move th the natural expansion and contraction of the tiles in applications such as flooring, alls, countertops, backsplashes. Flux Studios, Chicago. www.fluxstudios.com **CIRCLE 219**





▲ Recyclable family of seating

Metro's Poly family of seating features side and swivel chairs, a lounge, and an ottoman ideal for reception and lounge areas, enclaves, and both formal and informal meeting spaces. The Poly side chairs offer a pull-up seating alternative and are available with two base options: four-leg and sled. The grouping is created through the bonding of nonwoven PET (polyethylene terepthalate) fiber and a 100 percent recycled polyester fabric, creating a structural shell that is entirely recyclable. Metal components are finished with a VOC-free abrasion-resistant powder coating. Assembled together, the seating components are composed of over 25 percent recycled content by weight. Metropolitan Furniture, Oakland, Calif. www.metrofurniture.com **CIRCLE 220**

◄ Glass cameos

Skyline Design's products made cameos in several showrooms at NeoCon—including Herman Miller and izzydesign—where they were integrated into new office furniture systems. Skyline's newest collection of architectural etched glass, light+shadow, was on display at its temporary booth at the show. Designed by Lydia Esparaza, Wayne Susag, and Deborah Newmark, the series is inspired by the interplay of abstract organic forms and translucency. The collection comes in tempered, laminated, or clear plate glass in 10 patterns in standard sizes (up to 56" x 124"); ¼", ⅜", and ½" thicknesses; and it meets all glass safety requirements. Skyline Design, Chicago. www.skydesign.com **CIRCLE 221**

▲ The writing's on the wallpaper

The Parallel Lines collection is a group of three wall coverings from KnollTextiles designed by the New York City architecture and design firm Lewis.Tsurumaki.Lewis (LTL). Vector, Perimeter (above), and Margin feature a series of parallel lines that when installed appear as if they were drawn on the wall. To achieve the handcrafted effect, pencil drawings were scanned and digitally duplicated. The collection draws on LTL's experiments with producing conceptual architecture through drawings. All three patterns are color coordinated using a natural palette, including a range of neutrals punctuated by rich bronze, copper, and bright green. KnollTextiles, New York City. www.knolltextiles.com **CIRCLE 223**

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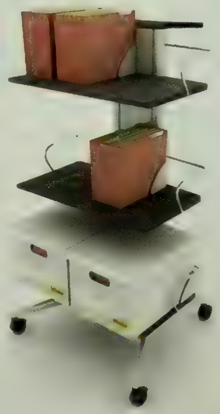
signed to help professional service firms take back eir work areas from piles of files and boxes, Allsteel s developed the Clerk mobile storage stand. Clerk's en, multiple shelves provide easy access to files, d the sliding shelf brackets stabilize and hold aller files in an organized position. Clerk also pro-es convenient mobility of files within and between ices, project rooms, and archival storage. The stand lds up to 80 pounds per shelf—240 pounds total—ile still being easy to push or pull. When not in use, ding shelves allow it to easily nest to allow for com-ct storage of multiple units. Allsteel, Muscatine, va. www.allsteeloffice.com **CIRCLE 222**



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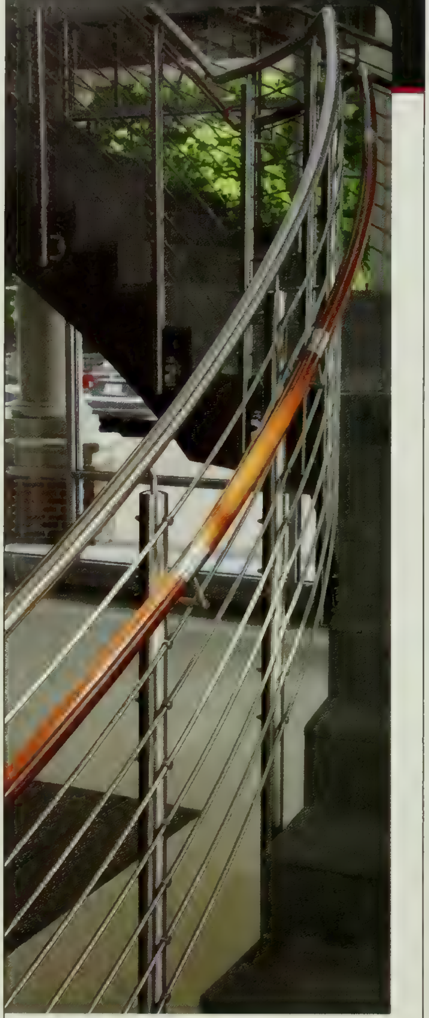

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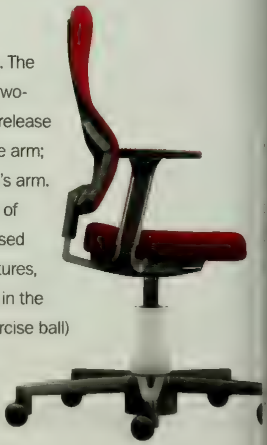
Product Briefs NeoCon Review

▼► From Bangkok to Portland

As in years past, Shaw Contract Carpet launched two new lines at the show, partnering with an outside designer for one, and developing the other in-house. The later group is the Silk collection of four broadloom and six tile products (left) showcasing a rich, saturated palette of 16 colors. Shaw Contract Group designers immersed themselves in the culture of silk by traveling to Thailand where they documented the visit with more than 2,000 photos of fabrics and colors. Suited for executive and professional services office spaces, Silk won a Gold Best of NeoCon Award for broadloom at the show. Also new from Shaw was Maine-based designer Angela Adams's first commercial carpet collection of tile and broadloom products (above right), which borrows heavily from Adams's own line of area rugs and accessories. Shaw Contract Carpet, Calhoun, Ga. www.shawcontractgroup.com **CIRCLE 224**

▼► Products in motion



Keilhauer has introduced two new designs from the Vienna-based design firm EOOS. The Tablett collection includes a lounge chair with four legs or a swivel base (left) and a two-person sofa, all available with one or two tablet arms, or with none. A simple magnet release mechanism enables users to access the arm; when not in use, it rests within the chair's arm. The Squig task chair (right) is the result of seven years of research into gender-based differences in seating. Among other features, Squig integrates spring bouncing action in the design (reminiscent of sitting on an exercise ball) to encourage back and abdominal muscle activity. Keilhauer, Toronto, Canada. www.keilhauer.com **CIRCLE 225**

◄ Pliable laminate material

Milanese designer Luisa Cevese adapted the technique she developed for her Riedizioni collection of accessories to create Ply, a "pliable laminate" material for interior applications manufactured for Maharam. The product is based on a proprietary process Cevese developed to embed textile remnants in a soft, translucent polyurethane. Variations of the substrate, coupled with jute, chenille, and tweed yarns, create bold effects: Low-contrast combinations accentuate texture, and high-contrast variations add an optical twist. The translucent variation of Ply allows for opportunities to showcase materials underneath the surface. Polyurethane, the foundatio of Ply, is a PVC-free organic polymer that offers the elasticity of latex coupled with extreme durability. Maharam, New York City. www.maharam.com **CIRCLE 226**

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◄ Glitter and shadow

The new Wolf-Gordon Vescom collection is an exclusive group of wall coverings adorned with whole, individual, or crushed crystals from Swarovski (left). The collection offers three designs in 12 luminescent colors and two application techniques, one of which is customizable to any design. Wolf-Gordon's inaugural student design competition, *Surface Over Structure*, resulted in a stellar collection of designs by students from Harvard's GSD. The winning design, Light (bottom left), by Corinne Ulmann and Isamu Kanda, abstracts the simple effect of daylight coming through a window and leaving its trace on the wall. Wolf-Gordon, Long Island City, N.Y. www.wolf-gordon.com **CIRCLE 227**

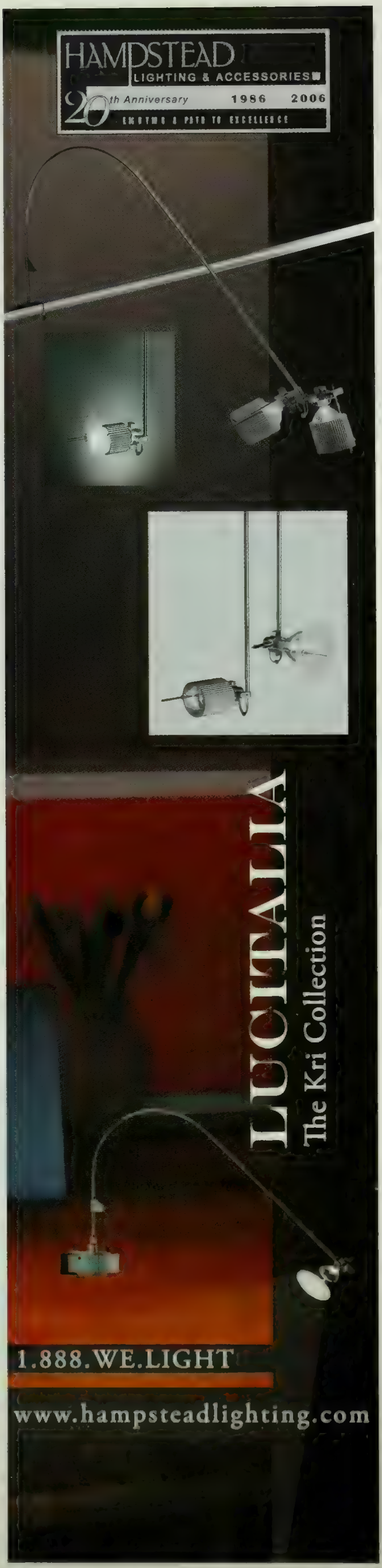
Get into the zone

e TechZone ceiling system from Armstrong organizes light fixtures, diffusers, and sprinkler heads in a linear 6"-wide "technical zone" create a more monolithic ceiling visual. By partnering with the ition's leading lighting, diffuser, and flexible-sprinkler connection anufacturers, Armstrong is able to provide an engineered, easy-to-ecify ceiling system that uses only standard components and minates the long lead times, hassles, and cost often associated th custom materials to achieve the same effect. The system coor-iates with the look of large-scale Optima panels and is appropriate use in large expanses and open areas that require superior oustical performance, such as open-plan offices, libraries, media nters, retail settings, and airports. Armstrong, Lancaster, Pa. vw.armstrong.com/techzone **CIRCLE 228**

Constructive work patterns

aworth's Patterns product collection spans from systems furniture to private offices to architecture. Designed by Studio Partners in Milan and Haworth's Design Studio, the collection is offered in a variety of heights, can be easily reconfig-ed, and also includes studio tables, benches, and file wrappers. Patterns inspired Haworth designer Joey Ruiter to eate Spool, a complementing work stool made for indoor and outdoor environments. Spool's aluminum components ntain a minimum of 25 percent recycled content, and all components are 100 percent recyclable. Both Patterns and ool are in the process of being Greenguard certified. Haworth, Holland, Mich. www.haworth.com **CIRCLE 229**

r more information, circle item numbers on Reader Service Card or go to ww.archrecord.com, under Products, then Reader Service.



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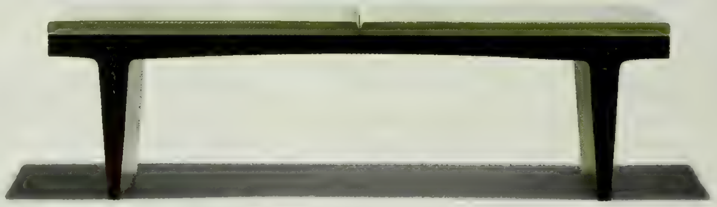
Product Briefs NeoCon Review

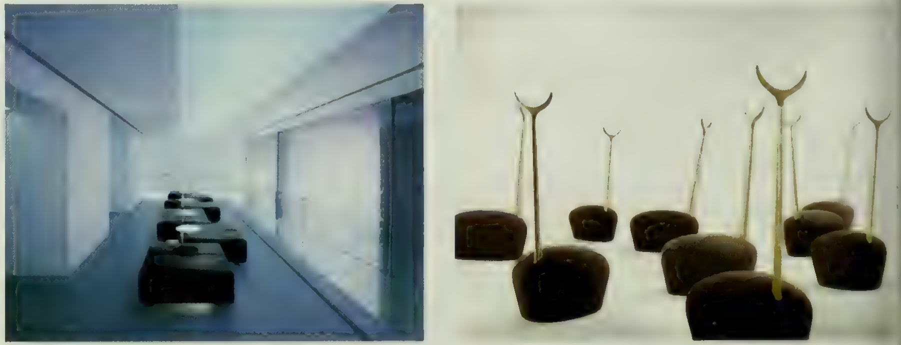
◄ Recycled content certification

Scientific Certification Systems announced recycled content cert fication for the new EcoCycle Series of eight porcelain stone tile products manufactured by Crossville. Certification of the EcoCycl Series confirms that Crossville meets the necessary criteria for recycled content claims based on internationally recognized stan dards and guidance established by the International Organizatio for Standardization and LEED. The eight natural-stone-look products in the EcoCycle series have a certified recycled content of 4 percent; fine particulate waste material that was previously landfilled is now recovered through a wastewater reclamation system All are 5/16" thick, and all but one are available in a 12"-square size Crossville, Crossville, Tenn. www.crossvilleinc.com **CIRCLE 230**



▲ Well-edited furniture collection

Suzanne Trocmé's award-winning 18-piece collection for Bernhardt Design is an elegant grouping of sofas and lounge pieces, side chairs, occasional tables, and benches. Trocmé, an editor for *Wallpaper** magazine, has written on art, fashion, music, interiors, and architecture for a variety of publications. One of the highlights of the collection is the Egalité bench (above), its named derived from the French Revolutionary motto "Liberté, Egalité, Fraternité." Th seat cushion is cut in two equal portions with a "V" cut in the center, allowing a shadow gap to provide an invisible border. Constructed in solid maple, it measures 60" x 19½" x 17½" and is offered in multiple light and dark wood finishes. Bernhardt Design, Lenoir, N.C. www.berhardtdesign.com **CIRCLE 231**



▲ Unexpected touches

Await (above left), designed by the Viennese firm EOOS, is a new line of modular lounge seating introduced by Brayton. The system features modular sofa and bench components that offer an unexpected radiant element of LED lighting under the seat frame. The low-energy lighting feature can be used to create a feature element in the space, provide a highlight to a flooring detail, or set the mood of the environment. Await also features ganging tables, tablets, a freestanding table in two heights, and a mobile ottoman on casters. The product will soon be UL-listed. The mobile Oom stool (above right), by furniture designer Matthew Weatherly, features a soft, upholstered seat with an integrated, handcrafted solid maple coatrack with a walnut inlay. Oom won an Innovation award in the Alternative Office category at the show. Brayton International, High Point, N.C. www.brayton.com **CIRCLE 232**

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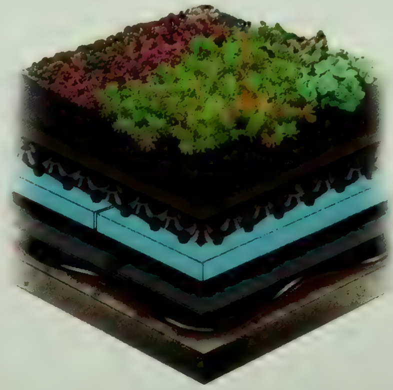

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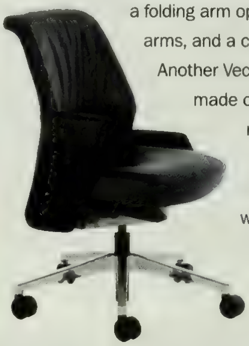
Product Briefs NeoCon Review

▼► Chairs that let you move



Designed by the renowned design firm IDEO, the Permiso conference chair from Vecta allows users to change posture, remain comfortable, and stay engaged in meetings through the application of four features: a folding arm option, continuous back and arm, recessed arms, and a chair back of ideal height for an armrest. Another Vecta introduction is the x-Stack chair, made of glass-filled nylon and flexible thermoplastic urethane (TPU), a material found in skateboard wheels, sport shoes, and watchbands. TPU is soft, flexes with user contact points, and is inherently resistant to stains, naturally antimicrobial, and easy to clean. X-stack caters to classroom, meeting, or dining-room applications, with an optional right- or left-handed table, an ambidextrous monopod for laptop use, and a cup holder. Vecta, Grand Prairie, Tex. www.vecta.com **CIRCLE 233**

► Opening up the line

Mitre casegoods, designed by Gary Lee Partners and introduced by Halcon at last year's show, has been expanded for 2006 to include an open office system, lounge seating, and guest seating. Mitre Open Office (right) bridges the gap between the look of custom millwork and the function of a furniture system. Also new from Halcon is an expansion of last year's Medio Conference collection, designed by the SOM Collaborative. The expanded line includes credenzas, training tables, and wall-mounted cabinetry for marker boards and videoconferencing. The dual-purpose wood training tables feature elegant, functional metal legs that accommodate plug-and-play power and communication requirements. Credenzas provide conference companion work surfaces with optional functions, including storage, AV equipment, and refrigeration. Halcon, Stewartville, Minn. www.halconcorp.com **CIRCLE 234**

◄ Pretty as a picture

Textile designer Lori Weitzner based her Shadowgraphs collection of textiles for Pallas Textiles on the images found in fine art photographer Zeva Oelbaum's latest book, *Flowers in Shadow*. Oelbaum's botanical studies take inspiration from cyanotypes, a vintage photographic process achieved by coating paper with a solution of iron salts, placing a plant specimen on the paper, and then exposing it to sunlight. When the paper was rinsed with water, the section exposed to the sunlight turned blue. The new line of woven jacquards is intended for a broad variety of contract applications, including corporate, hospitality, commercial, institutional, and public spaces. Pallas Textiles, Green Bay, Wis. www.pallastextiles.com **CIRCLE 235**

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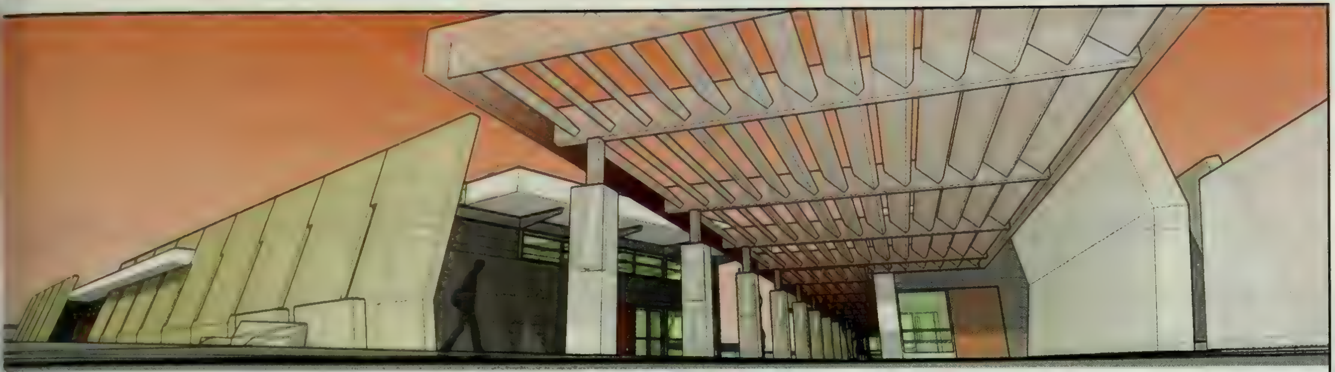

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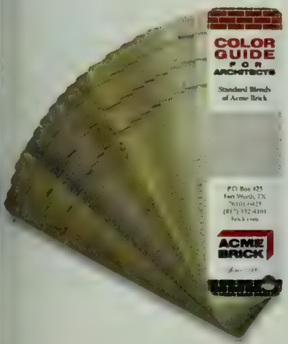
New WindsorOne catalog

WindsorOne recently released a new full-line catalog for its specialty lumber, molding, and millwork products. Utilizing innovative design and featuring updated photos, half of the 36-page catalog is devoted to interior product uses, while the other half is devoted to exterior uses. The catalog also includes a "Products at a Glance" specifications section and useful tips on product installation. WindsorOne, Windsor, Calif. www.windsorone.com **CIRCLE 237**

Miro movie

Watt Stopper/Legrand is featuring its Miro RF wireless lighting controls and architectural wiring devices in a new product portfolio. A 57-minute DVD details the process of installing and configuring a Miro system, and a new brochure provides information on every Miro product. Watt Stopper/Legrand, Santa Clara, Calif. www.wattstopper.com **CIRCLE 238**



Sticks of brick

As an alternative to unwieldy traditional brick sample panels, Acme Brick now offers a "fan" style color guide for its 67 commercial brick blends. The guide is organized by color families, coded for sizing, and is small enough that it can fit in a briefcase or coat pocket. Acme Brick Company, Fort Worth, Tex. www.brick.com **CIRCLE 239**

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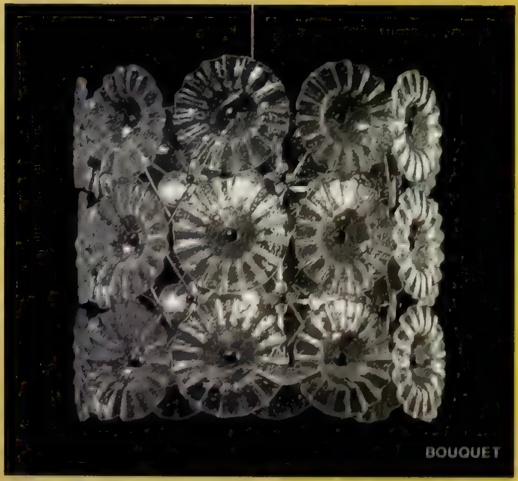

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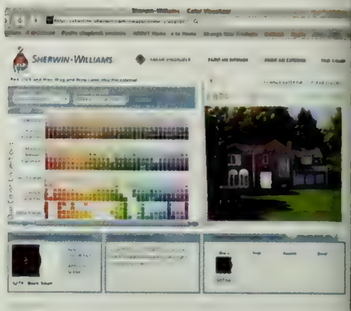
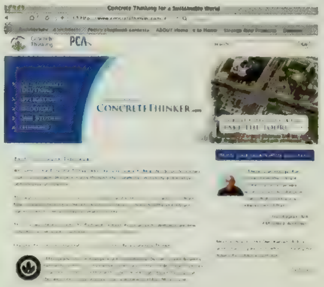
Product Resource: On the Web

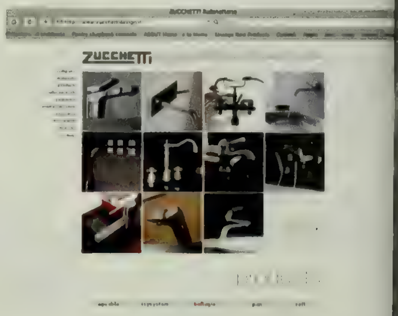
www.sherlink.sherwin.com/swapp/color_visualizer
The Sherwin-Williams Color Visualizer Web site just received the 10th annual Webby Award for excellence in Web design. The free site lets the user apply single colors or color schemes to available interior and exterior photos at the click of a button. One caveat: The site requires the latest version of Flash.

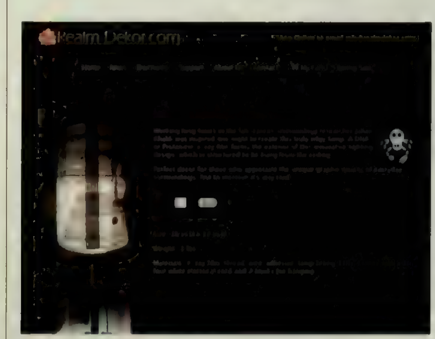




www.concretethinker.com
To provide an online green building resource for architects, the Portland Cement Association has launched a lively new Web site. The comprehensive site includes cross-indexed case studies, a list of the many uses of concrete, and a virtual city with pop-up buttons that help bring all of the information on the site to life.

www.zucchettidesign.it
Zucchetti's revamped Web site now showcases its designer faucets in five different languages. Despite a few technical kinks, the well-organized site features information on product designers, product photos, press releases, and an interactive map of the Zucchetti worldwide sales network.





www.realmdekor.com
Realm Dekor's Web site presents its line of Modernist home furnishings with a touch of quirky humor. A goldfish bowl is called a "Fish Condo," and cleaning products, including a faux-fur broom, are listed under "Necessary Evils." Lots of helpful mouseovers make for easy shopping.

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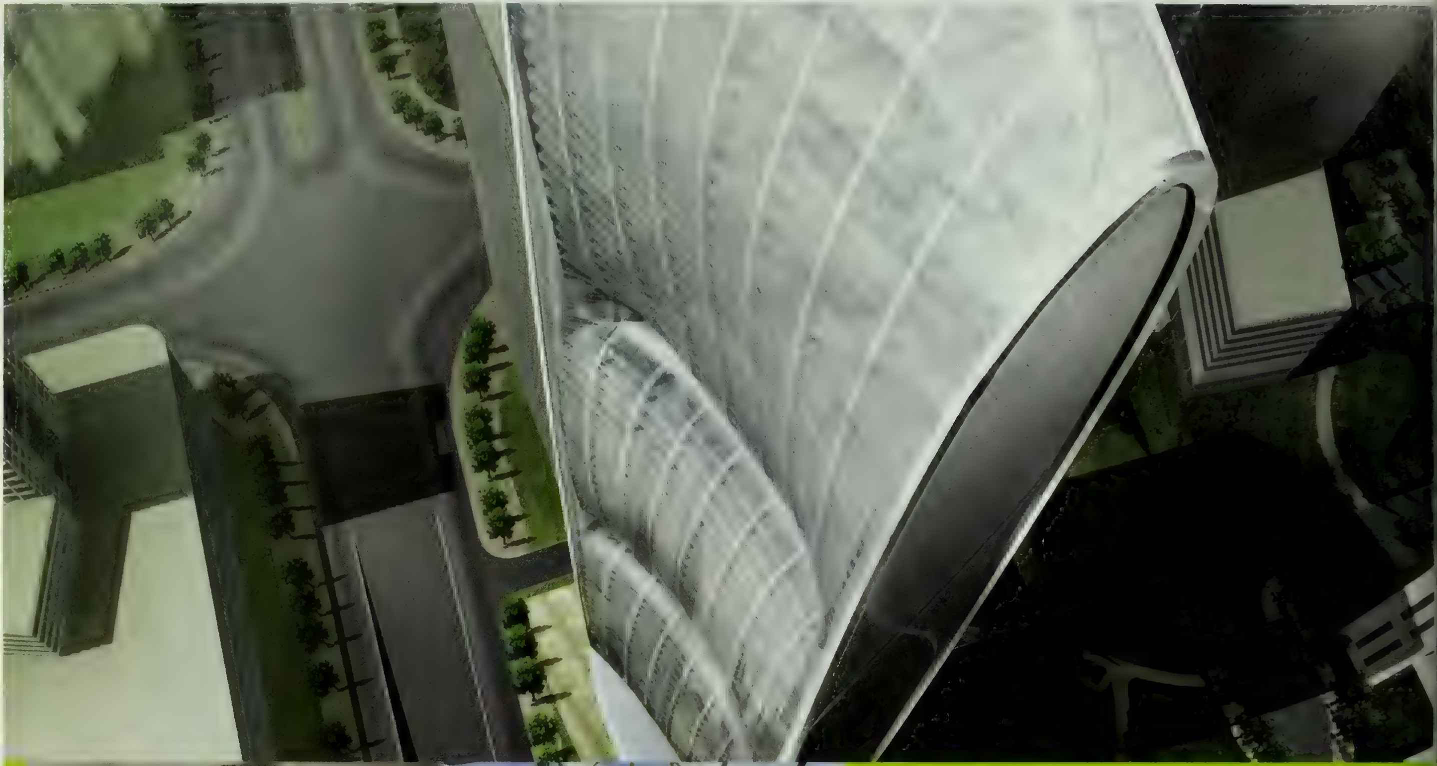

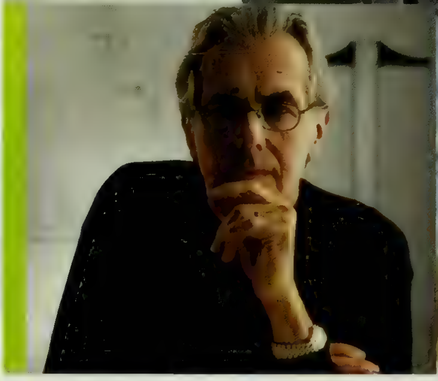

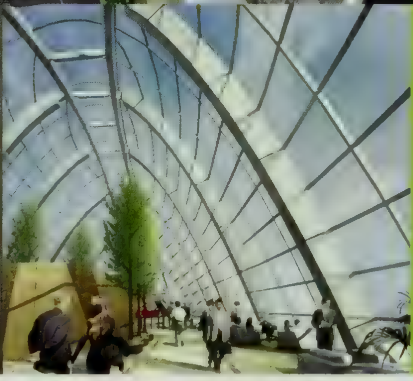

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ieptember 5–October 20, 2006

1 1956, several young architects from England, rance, the Netherlands, and Italy were charged vith organizing the 10th meeting of the nternational Congress of Modern Architecture CIAM), a formal gathering of proponents of Aodernism. This multimedia show pays homage o the coterie of Pan-European architects who, :hallenging the orthodoxies of Modernism in)ost–World War II Europe, raised issues of urban lesign that continue to reverberate in architec-ural discourse today. This exhibition draws on a range of resources and media that includes :orrespondence, transcripts, tape recordings,)hotographs, drawings, and film. At Yale's andmark Art & Architecture Building. Call 203-432-2288 or visit www.architecture.yale.edu.

The Loop: Designs for a Vertical City
Chicago

September 8–November 25, 2006

An exhibition of original conceptual and design drawings, working blueprints, and hectographs from the historic archives of D.H. Burnham and Company. ArchiTech's collection of vintage photographs by Richard Nickel and Aaron Siskind capture the heroic era of building in Chicago's famed Loop, the epicenter of skyscraper invention. At ArchiTech Gallery. Call 312-475-1290 or visit www.architechgallery.com.

Some Assembly Required: Contemporary Prefabricated Houses
New Haven

October 27, 2006–February 2, 2007

This exhibition featuring the work of eight contemporary architecture studios demonstrates how far prefabricated homes of the digital age have come from the "straight-off-the-assembly-line" look of the mid-20th century. At the Yale School of Architecture. Call 203-432-2288 or visit www.architecture.yale.edu.

Ongoing Exhibitions

Todd Eberle: Architectural Abstractions
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A traveling exhibition of Todd Eberle's works, which subvert traditional ways of picturing architecture. In these 13 large-format photographs, Eberle takes the most unlikely architectural details and recasts them as haunting, abstract images. In his work, photography is not a means to identify or document buildings; rather, it is a means to isolate supposedly "mundane" architectural elements, such as fluorescent light panels and tiles, and give them new life as glowing, mesmerizing compositions in their own right. Eberle draws his subjects from the most widely known architects of the modern era, including Frank Lloyd Wright, Adolf Loos, Gordon Bunshaft, and Philip Johnson. At the Art Institute of Chicago. Call 312/443-3600 or visit www.artic.edu.

Alvaro Siza/Architect: Drawings, Models, Photographs
Santa Monica, Calif.

Through August 19, 2006

The first museum survey in the United States to explore the distinguished 50-year career of Portuguese architect and Pritzker Prize–winner Alvaro Joaquim de Meio Siza Vieira. The exhibition's drawings, models, and photographs illustrate the attention to spatial relationships, sensitivity to material and texture, and use of light as an expressive and active element. At the Santa Monica Museum of Art. Call 310/586-6488 or visit www.smmoa.org.

From Wood to Architecture: Recent Designs from Finland
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Through August 25, 2006

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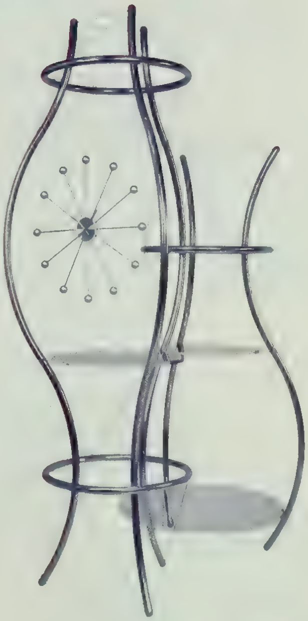

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Dates & Events

ties offered by the oldest of building materials: wood. Organized by the Museum of Finnish Architecture, the exhibition explores the current resurgence of wood as a building material. The show presents 17 recently constructed buildings in Finland, ranging from cultural centers to summer cottages to churches. The architects include established, internationally known figures such as Kristian Gullichsen, Mikko Heikkinen, and Markku Komonen, as well as a new generation of young designers, including Anssi Lassila and Ville Hara. At Scandinavia House: The Nordic Center in America. For more information, call 212/879-9779 or visit www.scandinaviahouse.org.

Joe Colombo: Inventing the Future
Weil am Rhein, Germany
Through September 10, 2006
One of the most successful designers of his time, Colombo produced design classics such as the Elda armchair, the Universale chair, and the Alogena lamp. Colombo died in 1971 at 41. Produced in close cooperation with his estate, the exhibition—the first international retrospective of Colombo's work—presents an abundance of never-before-shown materials. These include early original objects and prototypes of his most important furniture designs, as well as many original rough sketches, plans, brochures, architectural models, and several films and original photos. At Vitra Design Museum. For more information, call 49 76 21 702 3200 or visit www.design-museum.de.

Prairie Skyscraper: Frank Lloyd Wright's Price Tower
Washington, D.C.
Through September 17, 2006
Organized by Price Tower Arts Center (Bartlesville, Oklahoma) in cooperation with the Frank Lloyd Wright Foundation (Scottsdale, Arizona), Prairie Skyscraper will present for the first time a comprehensive selection of the Arts Center's collection of historic artworks and objects relating to the Price Tower, including never-before-exhibited Wright documents and drawings from its own holdings and from those of the Wright Foundation's archives. At the National Building Museum. For more information, call 202/272-2448 or visit www.nbm.org.

Crafting a Modern World: The Architecture and Design of Antonin and Noemi Raymond
Philadelphia
Through September 24, 2006
Antonin Raymond (1888–1976) and Noemi Raymond (nee Pernessin, 1889–1980) were married in 1914 and worked as partners in design for more than 60 years. Through their works, the Raymonds were able to forge a meaningful connection with the ancient traditions of Japan that widened the visual as well as the nonvisual possibilities of Modern design. This retrospective includes some 200 works, including drawings, models, photographs, videos, furniture, and other objects. At the University of Pennsylvania School of Design. Call 215/898-8323 or visit www.design.upenn.edu.

Artist's Choice: Herzog & de Meuron
New York City
Through September 25, 2006
The seventh exhibition in MoMA's *Artist's Choice* series, in which contemporary artists are invited to select, juxtapose, and comment on works from the museum's collection. Drawing from across the museum's departmental collections, the internationally renowned architects Jacques Herzog and Pierre de Meuron approach the collection not as conventional curators, but as architects. At the Museum of Modern Art. Call 212/708-9400 or visit www.moma.org.

Best of Friends: Buckminster Fuller and Isamu Noguchi
Long Island City, N.Y.
Through October 15, 2006
The relationship between the artist Isamu Noguchi and visionary designer and inventor Buckminster Fuller is illuminated in this special exhibition, which includes models, sculptures, drawings, photographs, film footage, and letters. At the Noguchi Museum. Call 718/204-7088 or visit www.noguchi.org.

Insight Out
Knislinge, Sweden
Through October 22, 2006
An exhibition of eight American artists showing site-specific installations in the Park, in the Stable, and in the Sculpture Yard surrounding the Wanas medieval castle. The work investigates subject matter such as architecture, narrative, scientific processes, and psychological perception. At the nonprofit Wanas Foundaton. Call 46 44 660 18 or visit www.wanas.se.

Zaha Hadid
New York City

rough October 25, 2006

e first woman to be awarded the distinguished tzker Architecture Prize, which she won in 04, Hadid is internationally known for both r theoretical and academic work, as well as a rtfolio of built projects that have literally ıifted the geometry of buildings." This exhibin provides a comprehensive look at her ›jects worldwide. True to Hadid's interdisciplιry approach to architecture, there is a wide ıge of mediums on display, including painting, awing, large-scale urban plans, proposals for ernational design competitions, building signs for contemporary cultural and sports ilities, and documentation of current projects der construction. At the Solomon R. ıggenheim Museum. Call 212/423-3500 or it www.guggenheim.org.

ıattle Architecture Foundation Tours
ıattle

rough October 28, 2006

ıattle Architecture Foundation connects ople to architecture through popular guided ılking tours, exhibitions, youth programs, and ıblic forums—programs that inspire particiınts to engage in shaping their community. sit www.seattlearchitecture.org.

antilever-Chairs: Architectural
anifesto and Material Experiment
enna

ırough October 29, 2006

ıe Cantilever-Chair represents one of the most gnificant products of avant-garde design of the 20s. These steel-tube chairs stem from the ıuhaus movement and the German Werkbund, ıd still challenge architects and designers today experiment anew with their form and material. ıe exhibition covers more than 80 years of innoıtive suspension design with chairs by Marcel euer and Ludwig Mies van der Rohe, right up to m Dixon and Ross Lovegrove. In the MAK Study ollection Rooms. Visit www.mak.at.

he Chicago Architecture Foundation
rchitecture River Cruises
hicago

ırough November 19

ed by trained volunteer docents, these cruises re well known as highly enjoyable as well as ducational. They visit 53 historic sites that ıclude the Wrigley Building, Merchandise Mart, ıe Tribune Tower, Sears Tower, Marina City owers, River City, and many more. The docents also provide background information on the lives of many of Chicago's famous architects and firms: Daniel Burnham, Graham Anderson Probst, Bertrand Goldberg, Mies van der Rohe, Helmut Jahn, Skidmore, Owings & Merrill, and Kohn Pedersen Fox. The cruises start at the southeast corner/lower level of the Michigan Avenue Bridge, just below the Hyatt Regency Chicago Hotel. Call 312/902-1500 or visit www.architecture.org.

Lectures, Conferences, and Symposia

The Public Realm: A Series of Civic Forums: Parts 2 and 3
Houston

August 9 and September 6, 2006

The Civic Forum series on the Public Realm presented by Houston's Rice Design Alliance focuses on the areas of the city where significant transformation has been or will soon be experienced. The series aims to discuss these changes in a manner that relates directly to the overall community of greater Houston. At the Museum of Fine Arts, Brown Auditorium. Call 713/348-4876 or visit www.rice.edu.

Lecture: David Hertz and the McKinley House—A Case Study in Green Residential Design
Washington, D.C.

August 10, 2006

With so many technologies available to make a house sustainable—solar panels, geothermal heat pumps, recycled building materials, and more—selecting from these choices and incorporating the technologies into an aesthetic design can be a challenge. David Hertz, principal of the Santa Monica–based firm David Hertz Architects/Syndesis and creator of Syndecrete, a "green" concrete, will discuss the design technologies employed in his McKinley House. This program complements the exhibition *The Green House*, which will be open for viewing. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

Films: An Evening with FLW
Washington, D.C.

August 16, 2006

Frank Lloyd Wright built his legacy as one of the greatest 20th-century architects through his buildings, teachings, and writings. The National Building Museum presents an evening of conver-

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sations with and about Wright with two film screenings. *Frank Lloyd Wright: The Mike Wallace Interviews* (1994, 53 min.) documents the architect in conversation with Mike Wallace in 1957. *The Frank Lloyd Wright Way* (1997, 60 min.) shares perspectives on Wright from four of his apprentices. This program complements the exhibition *Prairie Skyscraper*, which will be open for viewing. At the National Building Museum. Call 202/272-2448 or visit www.nbm.org.

London Design Festival 2006
London
September 15–30, 2006
Established in 2003 to celebrate and promote London as the creative capital of the world, the London Design Festival (LDF) has rapidly grown to become one of the key constituents of the U.K.'s burgeoning festival season, along with London Fashion Week and the London Film Festival. Disciplines include architecture, fashion, furniture, textiles, craft, product, digital, interiors, and jewelry. Visit www.londondesignfestival.com.

Lecture: Structure, Identity, and Existance in the Work of Team 10
New Haven
September 18, 2006
The distinguished architect and author Kenneth Frampton will deliver a lecture in connection with the exhibition *Team 10: A Utopia of the Present*. At the Yale School of Architecture. Call 203/432-2288 or visit www.architecture.yale.edu.

Symposium: Team 10: Thoughts on a Shiny New Brutalism
New Haven
September 21, 2006
This symposium, offered in conjuction with the Yale exhibition on Team 10, examines the legacy of the group as it intersects with contemporary architectural thought and production. Long marginalized, the work of Team 10 and its core protagonists Aldo van Eyck, Alison and Peter Smithson, Giancarlo de Carlo, and Shadrach Woods is the subject of renewed historical and theoretical interest as architectural discourse turns once again to the intersections of architecture, urbanism, infrastructure, landscape, and society. Participants include Thomas Avarmaete, Peter de Bretteville, Keith Krumwiede, Ana Miljacki, and Alan Plattus. At the Yale School of Architecture. Call 203-432-2288 or visit www.architecture.yale.edu.

Resurfacing the City: A Lecture Series
Houston
September 27–October 18, 2006
This lecture series will examine the renewed role of landscape and its emergence as an important motif in the discourse on architecture and urbanism. It will bring together the most innovative practitioners and thinkers of landscape as urbanism. James Corner of Field Operations will present the opening lecture. At the Museum of Fine Arts, Brown Auditorium. Call 713/348-4876 or visit www.rice.edu.

Urban Waterfronts 24: Celebrating 20 Years of Excellence on the Waterfront
Portland, Ore.
September 28–30, 2006
The Waterfront Center's annual international conference. Call 609/884-7997, 202/986-2549, or visit www.waterfrontcenter.org.

Symposium: The Dynamic Economies of Asia and Globa Wellness—Opportunities for the Pittsburgh Region
Pittsburgh
October 3, 2006
This symposium raises scholarship money for Carnegie Mellon School of Architecture students. The goal is to connect the business, medical, policy, architecture, and the academic fields together to recognize ways to adapt

ıetro regions into a global economy. t Carnegie Mellon School of rchitecture, McConomy Auditorium nd Rangos Ballroom. Call 412/268-554 or visit www.andrew.cmu.edu.

'acific Crossings: 006 AIA Northwest & Pacific :egion Conference and IA Committee on Design Fall :onference ong Kong and Shanghai
'ctober 16–22, 2006
IA Hong Kong in collaboration ith the AIA Committee on Design osts *Pacific Crossings*, a week-ong event that merges the 006 AIA Northwest & Pacific egion Conference with the IA Committee on Design Fall onference. Beginning in Hong ong and concluding in Shanghai, *'acific Crossings* features a wealth f professional, educational, and ultural activities. For information, isit www.aiahk.org, or call 52/2882-6011 or 202/626-7468.

:ompetitions

'okyo Lights International esign Competition for treet Lighting
'roposal Submission Deadline: ugust 25, 2006
n international competition for a ew street lamp design. The winning esign will be used to renew the treet lamps along Tokyo's Chuo-dori treet running through the areas of inza, Kyobashi, and Nihonbashi. 'his competition aims to present a ew model for street lighting in harmony with the city landscape in 'huo-dori, one of the major streets n Japan. The competition is open to esigners in the areas of lighting esign, urban landscaping, architecture, industrial and product design, and the arts. Visit www.tokyolights.jp or further information.

Imagining Penn Center: A National Student Design Competition to Plan New Life for Philadelphia's Central Civic Space
Deadline: September 15, 2006
Penn Center is one of Center City Philadelphia's most important spaces, housing Suburban Station, office towers, retail, and public plazas. Originally conceived by the late Edmund N. Bacon, Philadelphia's renowned former planning director, Penn Center changed the face of the city when it was built in the 1960s as one of the largest and most ambitious downtown redevelopments of its time. Today, Penn Center is vastly underutilized by the public, yet it holds great potential for revitalization. The Ed Bacon Foundation challenges students to imagine the site's potential and to generate ideas for restoring this important space as a modern Philadelphia epicenter and icon. For additional information, visit www.edbacon.org/penncenter.

Fire Station Design Awards Program
Deadline: September 15, 2006
The Fire Industry Equipment Research Organization (FIERO), in conjunction with the International Association of Fire Chiefs (IAFC) and *Fire-Rescue* magazine, invites submissions for its awards program to encourage excellence in fire-station design. The awards program is being held in as a part of FIERO's 5th National Symposium on Fire Station Design. Visit www.fierofirestation.com.

BSA's 2007 Research Grants in Architecture Program
Deadline: September 22, 2006.
Individuals and teams (architects, academics, designers, product developers, students, etc.) in the national design and construction industry seeking support for an original research project are encouraged to submit applications to the BSA's 2007 Research Grants in Architecture program. The BSA is

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gain offering up $75,000 in research grants to esigners nationwide. This program supports iginal research projects. Call 617/951-1433 or sit www.architects.org/grants.

he 5th Tile of Spain Awards of rchitecture and Interior Design

eadline: October 31, 2006

ponsored by the Spanish Ceramic Tile anufacturers' Association (ASCER), these wards recognize outstanding architectural and terior design projects using ceramic tiles from pain. Prizes totaling 45,000 euros are being fered; 18,000 euros each for the architecture nd interior design categories as well as 9,000 uros for the Degree Projects (Student) category. he competition is open to professional archi-ects, interior designers, architectural engineers, ndscapers, and decorators of all nationalities. ntries may represent new construction, renova-on and restoration projects, urban development rojects, or exterior landscaping. For more formation, visit www.spaintiles.info/awards.

he 2nd Annual JELD-WEN Student Door esign Contest

eadline: November 1, 2006

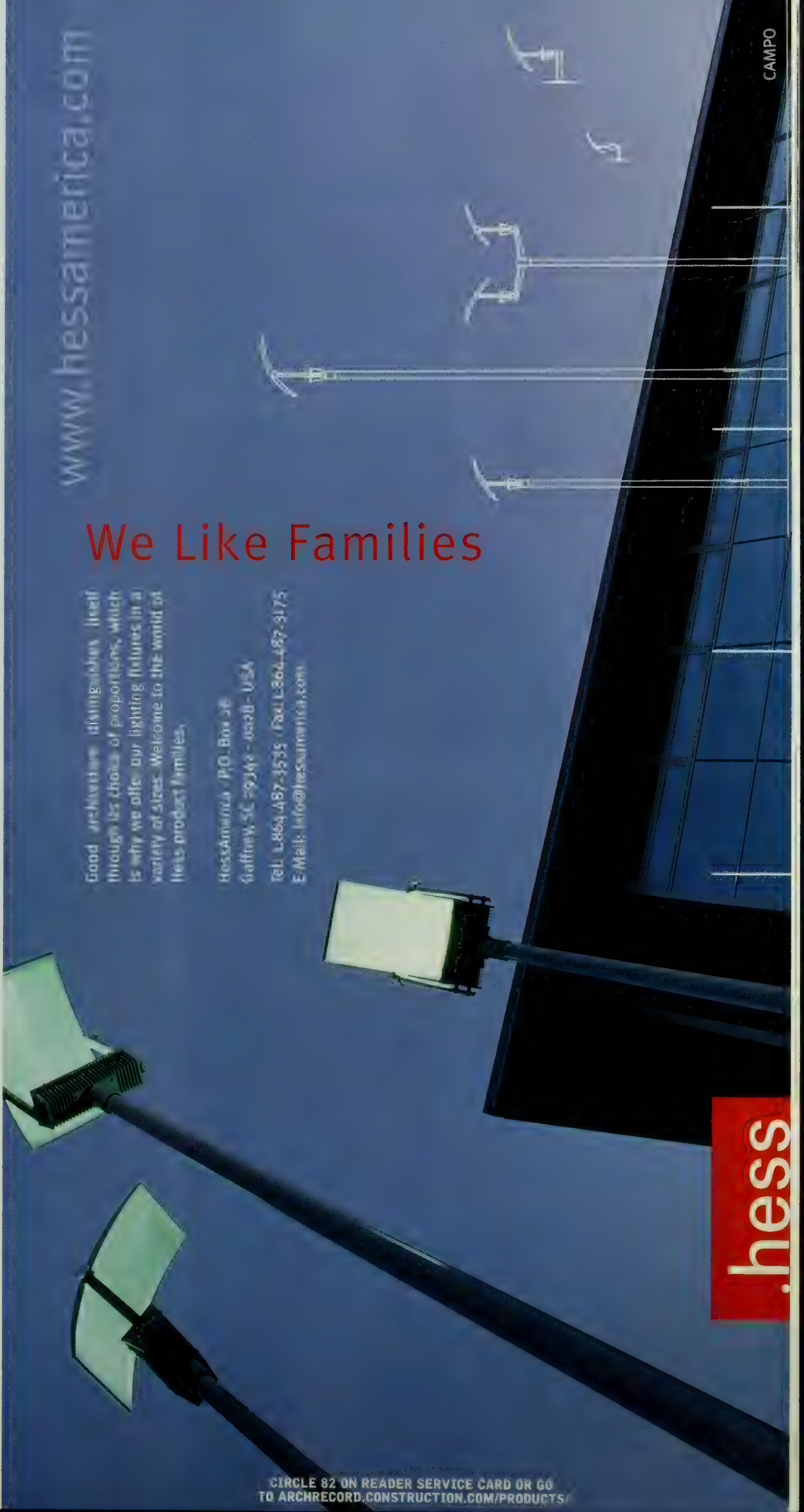
dividuals are invited to create and submit riginal designs for residential front doors, ocusing on the theme of "honoring architecture." isit www.jeld-wen.com/studentdesign.

007 Palladio Awards

eadline: November 15, 2006

ubmissions are now being accepted for e 2007 Palladio Awards. The sixth-annual ompetition will recognize outstanding work in aditional design for commercial, institutional, nd residential projects.The Palladio Awards pro-ram is coproduced by *Traditional Building* and *eriod Homes* magazines and is named in honor f Andrea Palladio, the Renaissance architect ho created modern architecture for his time hile drawing on past models for inspiration. For nore information, visit www.palladioawards.com.

-mail event and competition information wo months in advance to lisabeth_broome@mcgraw-hill.com.



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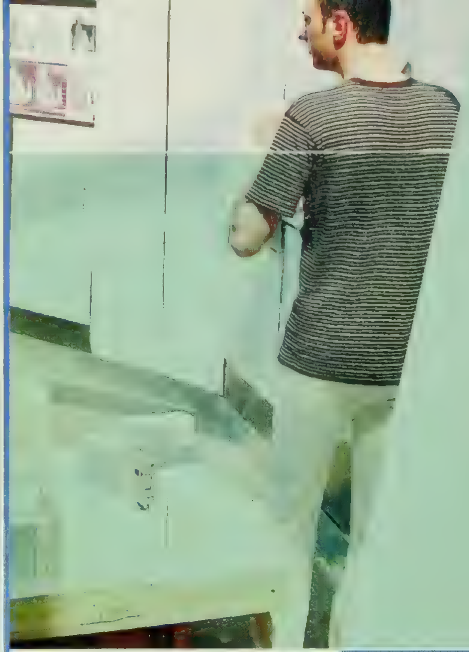

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The design studio lies at the core of architectural education. The experiences, habits and patterns found within the studio make up what we have termed, "studio culture." Design studio teaches critical thinking and creates an environment where students are taught to question all things in order to create better designs.

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3.	a	b	c	d	e	**8.**	a	b	c	d	e
4.	a	b	c	d	e	**9.**	a	b	c	d	e
5.	a	b	c	d	e	**10.**	a	b	c	d	e

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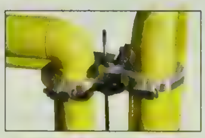

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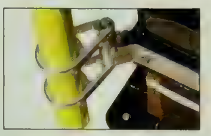

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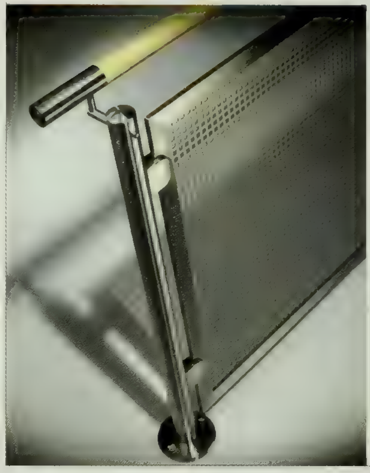
| Circle Reader Service #150

Pre-Engineered Railings

Handrail Design, Inc.



CIRCUM™ stainless railing system: Manufactured of corrosion-resistant stainless steel, CIRCUM is ideal for interior or exterior applications in commercial and residential facilities. Infill panels available in, but not limited to, perforated stainless steel, tempered glass, and stainless steel rods. Handrails in wood/stainless, stainless, or colored nylon. Curved rails and custom designs are available. HDI Railing Systems. Email info@hdirailings.com

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www.hdirailings.com

| Circle Reader Service #153

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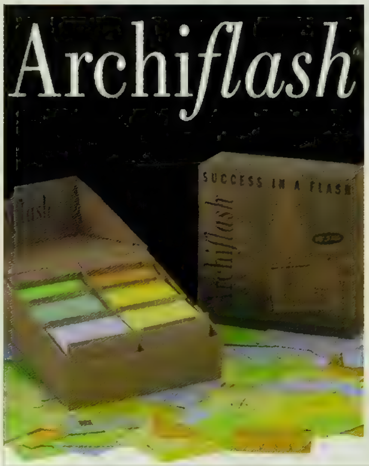

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| Circle Reader Service #151

Handrail Systems

P & P Artec

P & P Artec Modesto system, has 1 single round baluster. All fittings are powder coated. Their other systems include the Chicago – (flat bar baluster). Double Baluster – (2 round balusters), and Munich – (3 oval baluster). Artec has build a reputation in 100% seamless handrail tubes. All of their systems are assembled and finished in the field, to provide each project a unique custom installation, without any visible joints.

630-860-2990
www.artec-rail.com

| Circle Reader Service #154

Thin Stone Cladding Systems

Thin Stone Systems, LLC

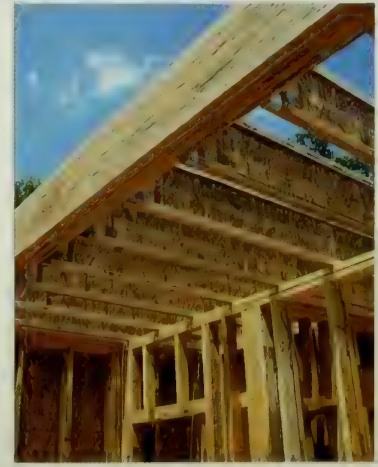
Thin lightweight natural stone wall cladding by THIN STONE SYSTEMS, LLC offers economical solutions for new construction and renovation, for both exterior and interior. Reinforced by a special patented process, the thin veneer panels of natural granite, marble, or limestone are applied to a structural framing system of extruded aluminum. Weighing only 6-lb. psf, the wall system provides many advantages including speed and simplicity of installation.

212-838-7667
www.thinstonesystems.com

| Circle Reader Service #152

Beams, Headers & Columns

iLevel™ by Weyerhaeuser



iLevel™ Trus Joist® Parallam® parallel strand lumber (PSL) is known for uniform quality, strength and good looks. iLevel's revolutionary technology delivers beams, headers and columns that are stronger, straighter and longer than conventional lumber. Parallam PSL beams and headers are available in large sections, eliminating field assembly and are compatible with common hardware—making installation quick and easy.

888-iLevel8
www.ilevel.com

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elton Classics, Inc.

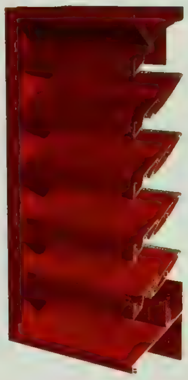
Melton Classics provides the design professional with the most comprehensive selection of quality architectural products in the industry, including architectural columns, balustrades, mouldings, cornices, and a wide array of architectural elements. Architectural columns are available plain or fluted, load-bearing or column covers, round or square in fiberglass, fiberglass/marble composite, synthetic stone, cast stone, GFRC, and wood for paint or stain. Melton Classics offers maintenance-free balustrade products ideal for any application.

800-963-3060
www.meltonclassics.com

| Circle Reader Service #156

6-in. Combination Louver Now Available

Airolite



Airolite continues to expand its louver line by offering a new combination louver. Airolite Louver Type K8206A features a drainable fixed blade and airfoil adjustable blade in a 6-in. frame depth with concealed linkage and a sloped sill. This louver can be specified in sizes as large as 60-in.-wide by 96-in.-high. Blade and jamb seals are standard, and different actuator options are available. Airolite Louver Type K8206A is licensed to bear the AMCA Seal for Water Penetration and Air Performance allowing designers to specify with confidence.

740-373-7676
www.airolite.com

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amboo Plyboard

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Providing a full range of bamboo plyboard for commercial and residential environments coast to coast and worldwide. A refreshing look in sustainable architecture and design. Plyboo® plyboard is a contributing finish under the 6.0 Section of LEED™.

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www.plyboo.com

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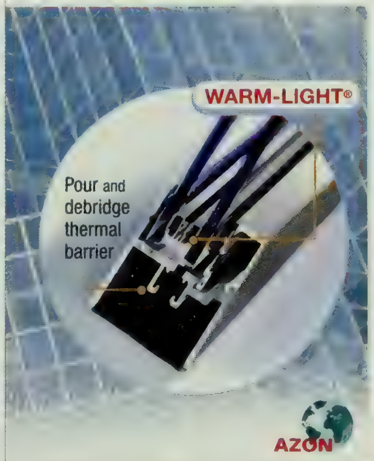
Extreme Performance Insulating Glass

AZON USA INC.


WARM-LIGHT®
Pour and debridge thermal barrier
AZON

Warm-Light® spacer for insulating glass provides a more comfortable interior environment, reduces thermal conductivity and condensation on the glass surface while lowering utility costs. Azon is the global leader in developing technology for the manufacture of thermal barrier aluminum fenestration, commonly referred to as the pour and debridge method.

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www.warmedge.com

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he Noble Company

NobleSeal TS is a thin, sheet membrane that provides uniform thickness and quality. Using TS helps insure watertight installations by minimizing workmanship variables.

NobleSeal TS is a sheet membrane for thin-bed waterproofing and crack isolation. TS can be bonded to vertical or horizontal substrates and tile can be thin-set to TS. It's ideal for shower walls, floors, handicapped showers and other applications where a mortar bed is not desired. TS is a sheet membrane which insures uniform thickness and quality and minimizes workmanship variables. Proven performance with millions of square feet installed.

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www.noblecompany.com

| Circle Reader Service #158

Versatile Windows

Fenevations, LLC

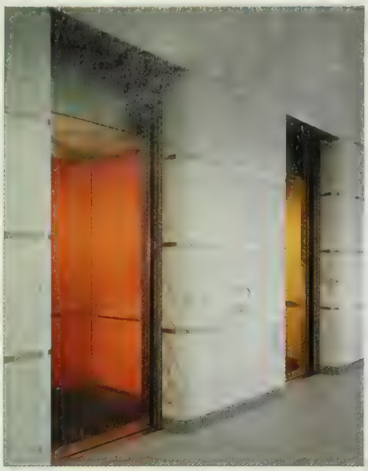
Fenevations manufactures MegaWood, Infinity Bronze, and SteelView windows. Megawood offers fine hardwoods with furniture-grade finishes, combined with heavy gauge bronze or hand welded, aluminum extruded exteriors. Infinity Bronze is a unique thermally broken solid bronze system offering beauty, style and traditional sightlines. SteelView offers stainless steel beauty for contemporary designs.

908-688-5710
www.fenevations.com

| Circle Reader Service #161

Opaque Glass Coatings

Goldray Industries Ltd.



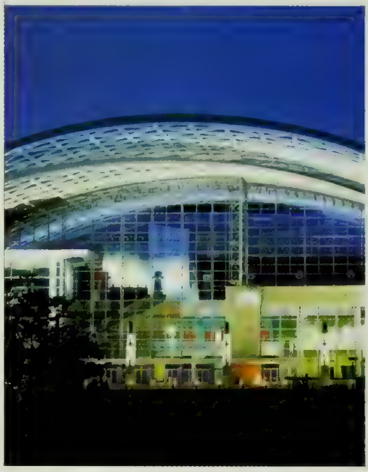
LCBA is a colorful opaque glass coating available in a wide palette of standard and custom colors including both solid and metallic. Goldray's glass cladding is an impact-and abrasion-resistant product which has an easy to clean, low maintenance surface. Customize your next project with the color and style of Goldray's opaque glass products.

800-640-3709
www.goldrayindustries.com

| Circle Reader Service #162

Solar Control Glass

Oldcastle Glass®



Exclusive, new SunGlass™ Solar Control Glass delivers the beauty of the sun without the heat. Now architects can specify a neutral color glass that invites the sun in without making building occupants sweat. That's because SunGlass™ delivers a combination of unprecedented solar control and visible light transmittance. It's the look you want with the performance you need.

866-OLDCASTLE (866-653-2278)
www.oldcastleglass.com

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Anti-Reflective Glass

IGT Glass

Luxar anti-reflective glass is perfect for any glass application where glare and reflection are not wanted. Luxar reduces glare and reflection to less than 0.5%. It is perfect for museums, store fronts, stadiums, restaurants, projection rooms and display cases. It is available on low iron float glass for maximum clarity in 2mm to 12mm thicknesses to meet any project requirement.

480-767-8220
www.luxar.ch

| Circle Reader Service #163

Brochure & Data Sheet

Pilkington Fire Protection Glass North America

Pilkington introduces a new product brochure and technical data sheet. The brochure includes information on both the Pilkington Pyrostop™ Fire Resistant Glass and Pilkington Pyrodur™ Fire Protection Glass products. You can download a copy of the new brochure and data sheet from their web site or call them. The products are available in the U.S. through Technical Glass Products (TGP).

419-478-0165
www.pilkington.com/fire

| Circle Reader Service #166

Curved Translucent FRP Panel Systems

Major Industries, Inc.

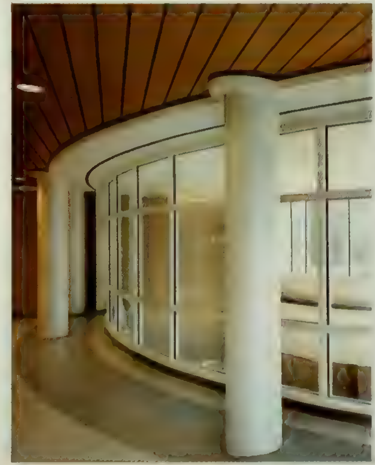
When your daylighting project demands something special, the TransCURVE™ translucent building panel system provides exceptional performance, with the added benefit of a striking, unique appearance. TransCURVE™ glazing panels feature a visually attractive aluminum grid core in several popular patterns, giving panels a refined look while maintaining exceptional strength. TransCURVE™ also features a premium architectural-grade FRP exterior skin that blocks damaging UV rays while transmitting the beauty of natural light.

715-842-4616
www.majorskylights.com

| Circle Reader Service #164

Fire Rated Aluminum Framing

SAFTI*FIRST*



With SAFTIFIRST's SAFTI*fire* Frames, rated 45-min. to 2-hr., you can create the maximum barrier against fire and radiant heat while providing attractive framing that meets all the temperature requirements of the national building codes. Design flexibility of multiple forms makes for easy installation, creating a sleek, attractive profile.

888-653-333
www.safti.com

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ntrance Products Ideal for Green Construction

pecial-Lite, Inc.

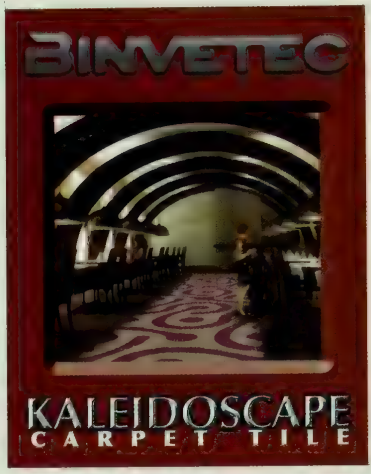
Not only are Special-Lite entrance products the first with GREENGUARD™ Certification, their durable finishes never need to be painted or refinished reducing maintenance costs and eliminating associated health risks. When compared to hollow metal doors, Special-Lite doors provide superior thermal performance, longer service life for the entire entrance, and lower lifecycle cost. Clearly, Special-Lite doors are the more sustainable choice. To learn more, request Special-Lite's green brochure.

800-821-6531
www.special-lite.com

| Circle Reader Service #168

Carpet Tile

Binvetec, LLC



Kaleidoscape Carpet Tile with TractionBac non-adhesive installation system is the only modular floor covering solution that can create a wholly non-repetitive and free-flowing pattern from a single tile design. They can also be arranged in groups to create myriad patterns. Available in nine color combinations, they can be used to create entire wall-to-wall floor coverings, runners, or assembled together to make six-tile area rugs (6-ft. by 9-ft.).

714-731-2369
www.binvetec.com

| Circle Reader Service #171

ire-Rated Glass & Framing

echnical Glass Products

Technical Glass Products has been a national distributor of fire-rated glazing and framing materials since 1980. They are committed to providing reliable, rapid service and outstanding product options. Their knowledgeable staff can assist you in determining which product is right for your application. Contact Technical Glass Products at 1-800-426-0279 or www.fireglass.com.

800-426-0279
www.fireglass.com

| Circle Reader Service #169

Decorative Wall Panels

Crane Composites / Kemlite Company

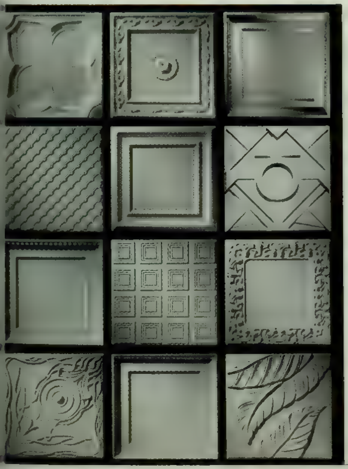
frpDesign Solutions is a family of decorative wall panels that provides an alternative to traditional wall coverings such as ceramic tile, wood paneling or vinyl wall coverings. Offering both functionality and design, products in the frpDesign Solutions line are made of a moisture-resistant frp panel with a decorative finish that includes myriad colors, patterns, and woodgrains, as well as a tile-look panel. Available with over 500 choices, frpDesign Solutions is easy to install and maintain. For more information, visit Kemlite on the web.

888-332-6377
www.frpdesignsolutions.com

| Circle Reader Service #172

rnamental Plaster Ceiling Tiles

bove View Mfg., By Tiles, Inc.



Above View ornamental plaster ceiling tiles are fabricated from a non-toxic, non-combustible, proprietary composition. They drop into any standard 15/16-in. T-Bar grid system. There are more than 50 standard designs, custom design work, and 1,300 custom colors and faux finishes available upon request.

414-744-7118
www.aboveview.com

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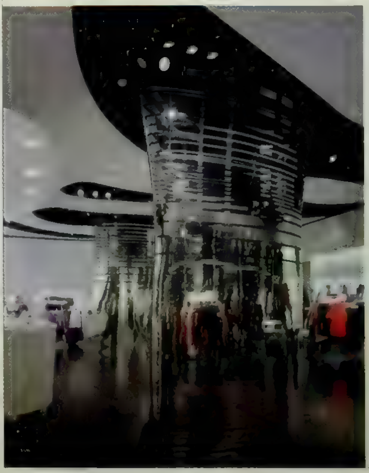
Custom Column Covers

Eventscape Inc.



Mirrored chrome, and over 150 hand-bent aluminum strips cover these 15 ft.-high custom column covers. Built for the FILA flagship store in NYC; it won the 2006 NASFM Store of the Year. Just one example of the numerous custom column solutions engineered and fabricated to meet your specifications. View their complete portfolio on the Eventscape web site. "Create without boundaries."

416-231-8855
www.eventscape.net

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Cast Metal Wall Surfacing

Gage Corporation

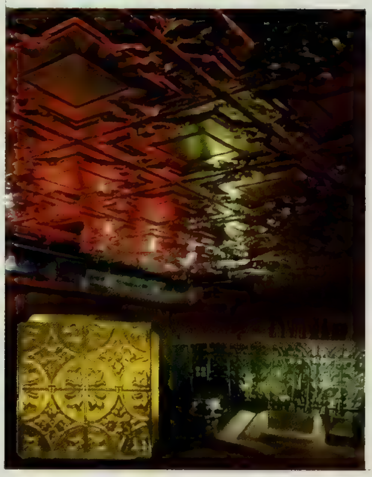
Gagecast® is a cast metal wall surfacing material suitable for a variety of interior architectural applications where patterns that feature high luster, relief, durability, and cost effective installation are a requirement. Twenty-eight designs are standard, however, custom collaboration is encouraged. Gagecast® is one component of Gage Vertical Surfacing. Contact the factory for product literature and selected samples.

800-786-4243
www.gageverticalsurfacing.com

| Circle Reader Service #174

Authentic Tin Products

The American Tin Ceiling Co.



One of the largest manufacturers of authentic tin ceilings panels, offering over 30 of the finest embossment patterns and over 50 high quality powder coat finishes. Exclusive distributors of the innovative SnapLock™ and 3D Dropin tin ceiling panels. Eight designers provide free phone consultation six days a week. Orders shipped direct worldwide. Fax number 941-359-8776

888-231-7500
www.americantinceilings.com

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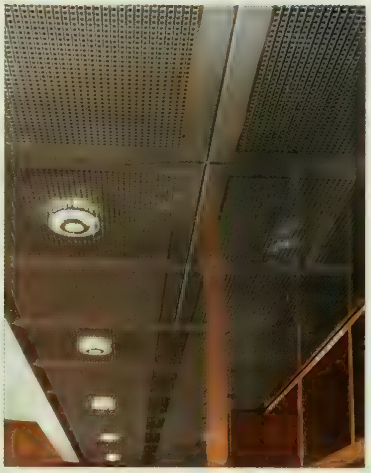
Decorative Metal Ceilings

Gage Corporation, Inc.



The Gage Corporation International has been designing and manufacturing decorative metal ceilings since 1989. Gage ceilings feature more than 50% post-consumer recycled material and are visually rich, functional, and versatile as a design medium. Custom collaboration is encouraged. Email gage@centurytel.net

800-786-4243
www.gageceilings.com

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Unique Surface with Metallic Glaze

Viva Ceramica

Viva has added to their philosophy the idea of not weighing down this world with useless products, copies of things that have already been seen, interchangeable repetitions of objects that are born today and die out with fashion. IRIDIUM is created to be exclusive, for those who understand and know how to appreciate the value of things that last and the work and passion that is part and parcel of their ceramic workshop. A metallic glaze with iridescent tones creates an absolutely new type of surface. Ideal for homes, offices, shops and public venues.

www.cerviva.it

| Circle Reader Service #178

Stainless Steel Floor System

Gage Corporation, Inc.

The Gage Stainless Steel Floor System is a durable, high-tech flooring solution designed in Italy for purity of form and ease of installation. The embossed stainless steel finish has been specifically designed to prevent traffic wear and is virtually indestructible. "The system is the solution."

866-855-4243
www.gageverticalsurfacing.com

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Architectural Sun Control

ASCA, Inc.

ASCA, Inc. provides an infinite assortment of efficient and cost effective sun shading solutions. While functionally reducing heat gains upwards to 80%, ASCA's sun control systems provide a striking architectural statement. Custom or traditional, intelligent heat and light control is now afforded to every designer through ASCA's creative component design and versatility of manufacturing techniques. Fax number 603-433-6700 Email info@asca-design.com

866-ASCA-USA
www.asca-design.com

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Architectural Sheetmetal Products

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CopperCraft manufactures a complete line of high-quality architectural sheetmetal products including ornamental dormers, roof vents, roof drainage products, conductor heads, steeples, cupolas, and spires, as well as items which are custom built to your specifications. Design, engineering, testing, and fabrication methods that meet stringent structural and performance standards make the difference. You get unsurpassed quality, delivery, and custom service including a nationwide network of representatives.

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Lighted Address Plaque

Custom Home Accessories, Inc.

During an emergency, a reduction of just a few seconds in response time can mean the difference between life and death. Clearly visible at over 100 feet away, the Edgewood provides fast and accurate address identification, day or night. Made of cast aluminum or brass, these fixtures come in 5 styles and 10 finish options.

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www.mailboxes.info

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Retail Canopies

Mapes Industries

Mapes Industries has developed a complete line of hanger rod canopies for any retail project. Extruded or roll formed can be used for retail branding, mixed use shopping centers, fast food franchises and downtown redevelopment. Custom fascia, deck escutcheons and colors are available. Canopies are designed for high wind or snow loads. They can be mounted on any wall including metal buildings, EIFS, CMU or any retrofit wall condition. For complete information visit www.mapes.com or call 888-273-1132.

888-273-1132
www.mapes.com

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Extruded Aluminum Shelves

Rangine Corporation / Rakks

Rakks extruded aluminum shelves feature an attractive low-profile design that exceeds the strength and stiffness of 3/4-in. plywood. Shelf depths up to 18-in. can be achieved by combining 4- and 6-in. deep sections. This lightweight, easy-to-ship shelving can be ordered in specified lengths up to 12-ft. Please visit the company's web site for information on aluminum shelves and their full line of wall mounted and pole supported shelving. (Shown at left: Rakks extruded aluminum shelves on "C" standards and brackets at Clicquot, Inc. New York. Design: Traboscia Roiatti Architects).

800-826-6006
www.rakks.com

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TV Lifts

Architectural Products by Outwater, LLC

Although LCD, DLP and plasma screen televisions and computer monitors have readily emerged as accepted fully integrated commonplace fixtures within today's homes, aesthetically speaking, they are viewed as the modern day Achilles heel; monumental physical eyesores devouring vast areas of much needed space without regard...until now. Outwater introduces its new series of low cost, very high-quality motorized TV Lifts and complementary accessories to accommodate all formats and sizes of commercially available LCD, DLP and plasma screen televisions and computer monitors for any type of design application.

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www.outwater.com

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Clean-Lined Outdoor Furniture

Modern Outdoor

Modern Outdoor offers three complete lines of high-style, clean-lined environmentally conscious outdoor furniture. The Modern Outdoor Collections are commercial grade products designed for use in all manner of public spaces—restaurants, hospitality, parks, resorts, hotels—yet have an aesthetic that is perfect for a residential client's backyard setting. Their products now come in ipe or polyboard, stainless steel or powder-coated steel, and a natural composite material. They offer net pricing to qualified members of the trade. View the entire collection online.

818-785-0171
www.modernoutdoor.com

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Custom-built Steam Shower

Sculptured Homes, LLC

The WetSpa is a contemporary alternative to a custom-built steam shower, in one complete package. The package includes a 3 1/4-in. Corian floor system that can be recessed for barrier free entry, 3/8-in. tempered glass walls that can be custom color-coated for installation in a corner or alcove, pre-plumbed wet-wall, choice of shower fittings and optional steam, fiber-optic lighting, marine-grade stereo speaker and seating. Standard sizes facilitate easy specification for remodels and new constructions for both commercial and residential applications.

248-723-5230
www.wetspas.com
HD Boutique Booth #2088

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Underground HVAC Duct System

Foremost Duct Division of ARK II Mfg.

Foremost Duct PCD (Polyvinyl Coated Ductwork) is specified by more engineers and architects than any other underground HVAC duct system. By combining the strength of steel and the chemical inertness of plastic, PCD is lightweight, as well as corrosion- and weather-resistant. PCD ductwork is guaranteed not to rust, chip, crack, peel, corrode, or produce odors. Foremost offers spiral, rectangular, flat oval, single wall, and dual wall ductwork, manufactured with numerous metals and connection systems.

800-521-9316
www.foremostduct.com

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Bathroom Fittings

Symmons Industries, Inc.

Elements is the newest collection of exquisitely designed bathroom fittings from Symmons Industries. These same fittings were custom-designed by world-class luxury hotels such as the Mandarin Oriental, the Four Seasons, and the Ritz-Carlton, to name only a few. Architects, designers, and developers all turn to Symmons' Signature Design Studio to create such uniquely designed fittings for their properties. Now, the luxury and class that people have been exposed to at such lavish hotels can be experienced at home. Email info@symmons.com

800-SYMMONS
www.symmons.com

| Circle Reader Service #187

Custom Light Fixtures

CP Lighting

CPLIGHTING introduces the *new*GROWTH chandelier. Custom fabricated from brushed aluminum, these UL listed fixtures are a modern sculptural interpretation of fallen branches. Like real trees, no two *new*GROWTH fixtures are ever alike. Each fixture is built to suit your specific project needs utilizing line-voltage type JCD halogen bulbs. Please visit their web site to see their complete line of modern light fixtures designed by Christopher Poehlmann including their recycled acrylic *Popsicle Pendant* series.

866-597-4800
www.cplighting.com

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Tub & Shower Valve

Zurn Plumbing Products Group

Temp-Gard III, manufactured by Zurn AquaSpec® is a single-handle pressure balancing mixing tub and shower valve, with an ADA-compliant handle, chrome finish, and a heavy duty ceramic control cartridge with a stainless steel balancing piston. It features a built-in reverse connection capacity and two integral service stop/check stops and an adjustable temperature limit stop. The four-port valve body has a tub port plug included for shower-only applications. The valve inlet, shower outlet, and tub outlet are standard with half inch N.P.T. female thread connections.

877-987-6669
www.zurn.com

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Large Lighting for Large Spaces

Engineered Lighting Products

These extruded, A15 fixtures are 7-1/4-in. by 25-5/8-in. by 28-in. They tilt for precise aiming of the asymmetric beam and can be secured in place. Interior and exterior wet location styles are available in one or two lamp configurations for Metal Halide, HPS or Fluorescent models. Fax number 626-579-6803 Email elp2@aol.com

626-579-0943
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rchitectural Ceiling Fans & Lighting

Squared

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www.g2art.com

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Sleek & Contemporary Pendants

W2 Architectural Lighting

Bridging function and design, W2 ARCHITECTURAL LIGHTING introduces "Architectural Elements," contemporary pendants crafted with a sleek design and scale for large, challenging spaces. W2 ARCHITECTURAL LIGHTING, a new division of W.A.C. Lighting, offers specification grade products for commercial, hospitality and retail applications. Achieving a perfect balance of color and light, the pendants are designed with glossy, cased Opal glass shades to spread light evenly and minimize glare.

866-788-2100
www.W2lighting.com

| Circle Reader Service #195

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thonia Lighting

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European Cobblestone

Eurocobble

An updated catalog features authentic European cobblestone preassembled in modular form. Modules in square, fan, concentric ring, and custom formats arrive at the job site ready for a quick and easy installation. Pedestrian or vehicular application. Eurocobble® has supplied the design community with traditional and customized paving solutions for over 20 years. Call toll free or visit the Web site.

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ELUX Corporation

Integrating the SELUX patented MTR refractor technology for glare reduction, MTR Column is a perfect choice for pedestrian and urban area lighting. Choose from three distinct styles in standard heights of 12-, 14- and 16-ft., or in user specified heights. Accommodates up to four T-8 fluorescent lamps, with H.I.D. possible.

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Gate Safety Brochure

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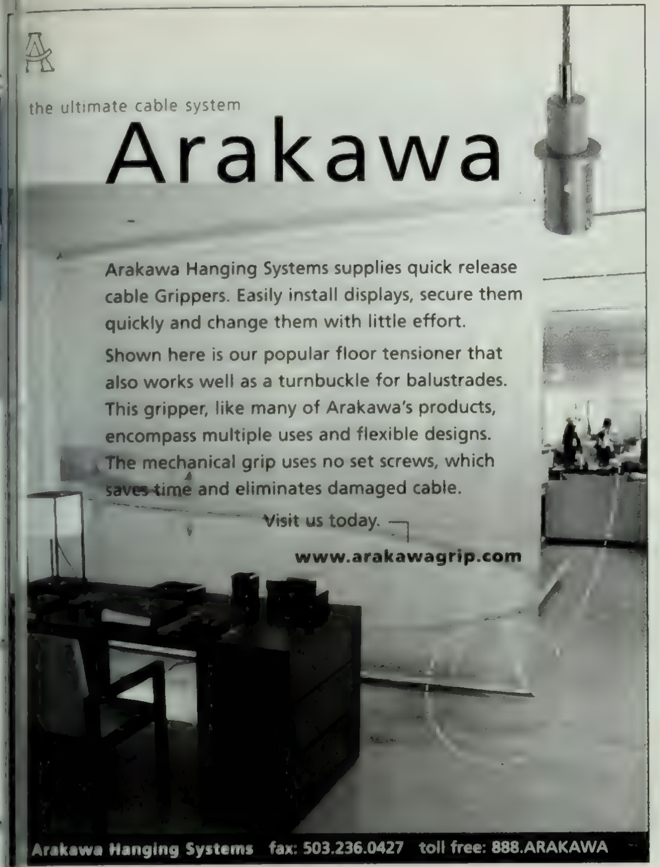

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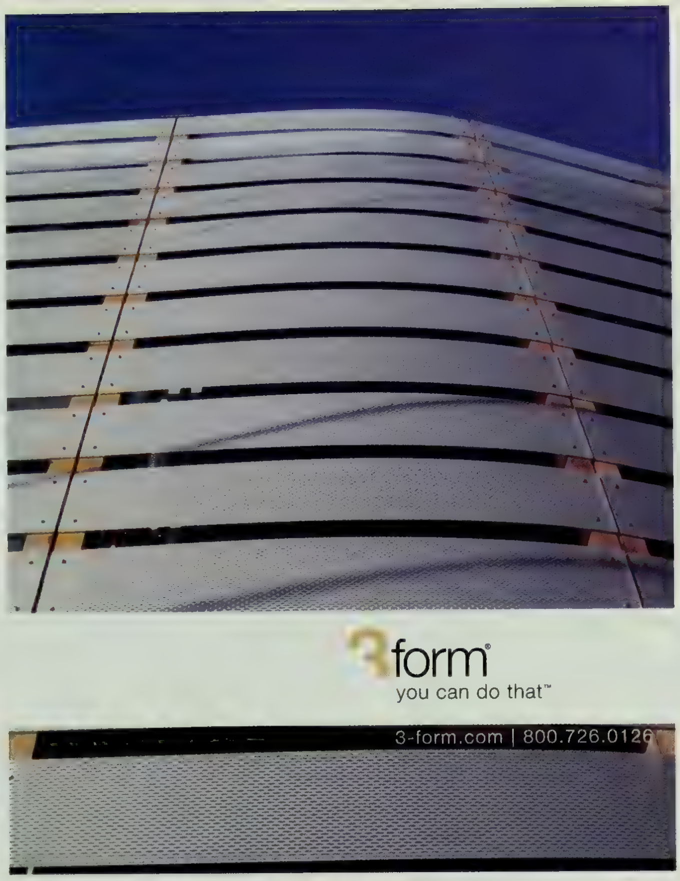

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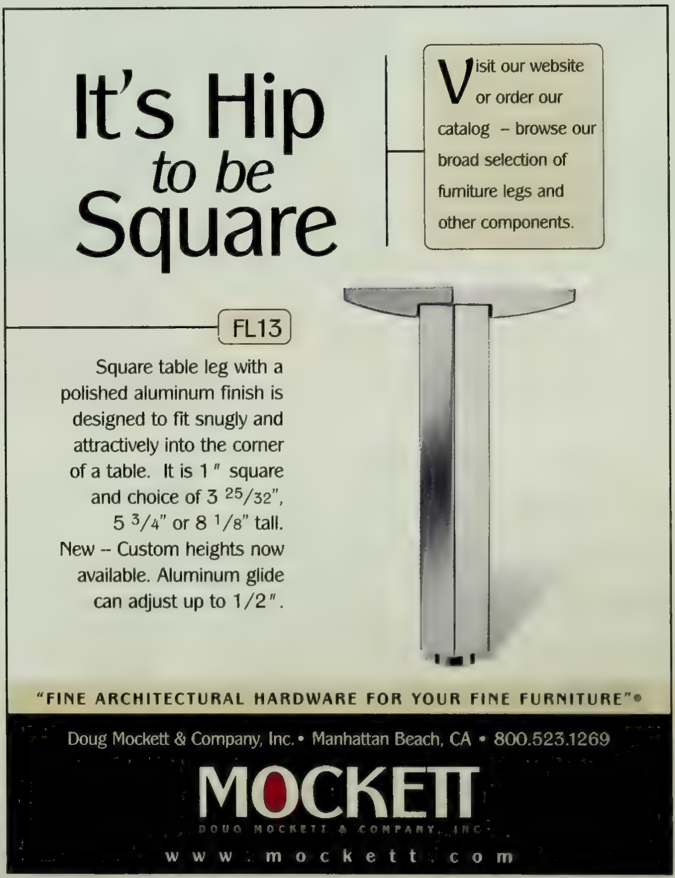

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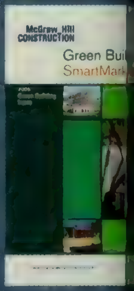

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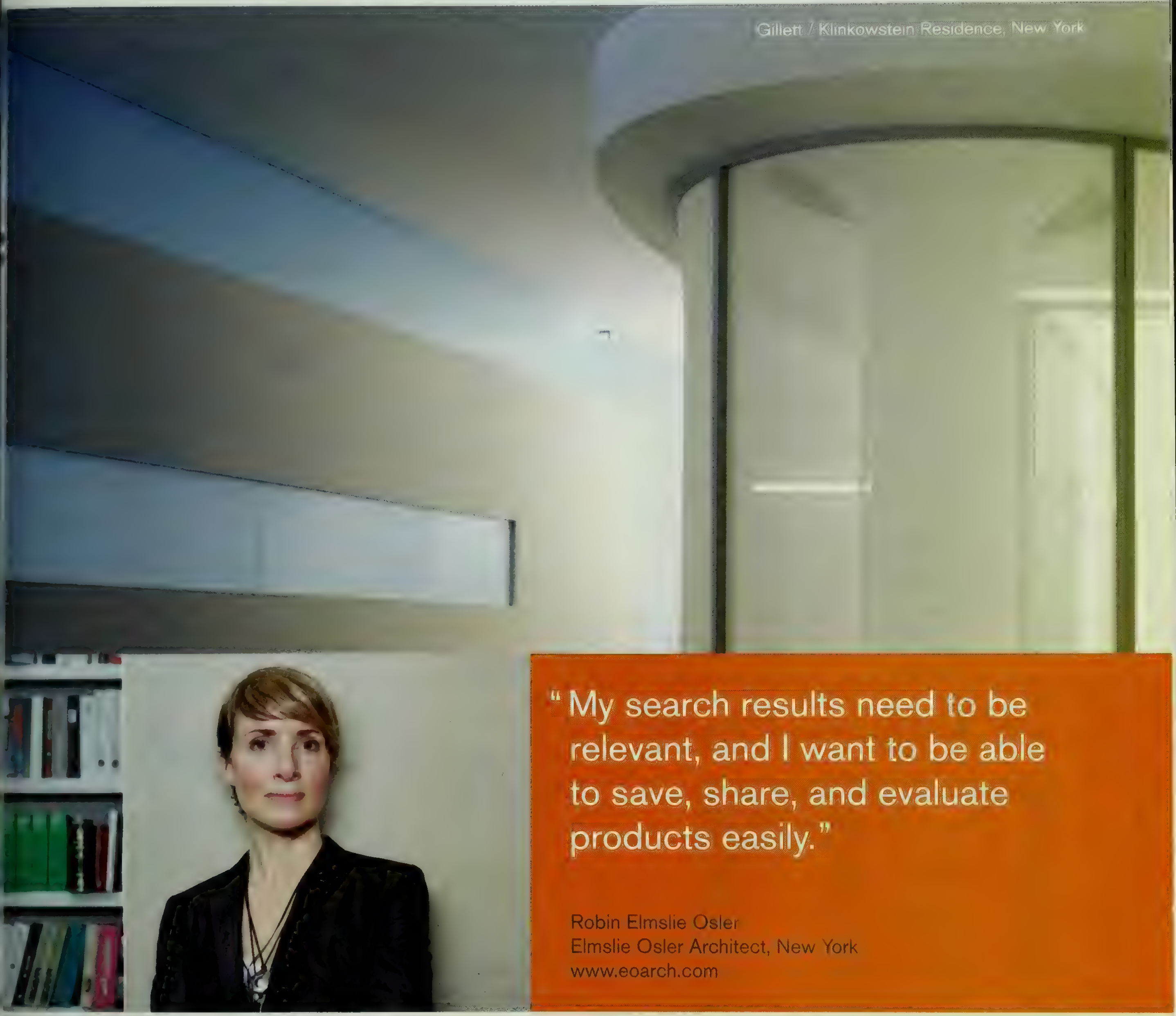

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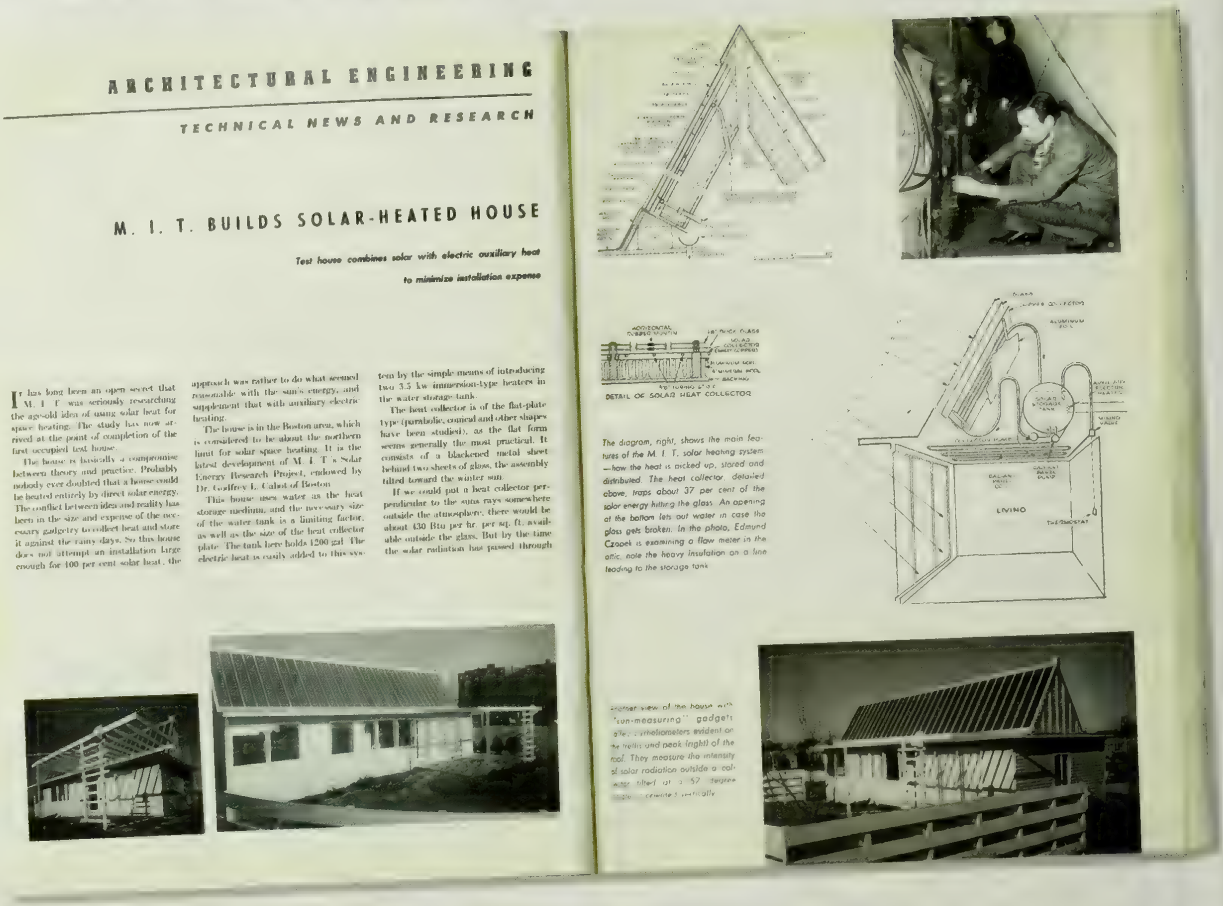

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M. I. T. BUILDS SOLAR-HEATED HOUSE

Test house combines solar with electric auxiliary heat to minimize installation expense

It has long been an open secret that M. I. T. was seriously researching the age-old idea of using solar heat for space heating. The study has now arrived at the point of completion of the first occupied test house.

The house is basically a compromise between theory and practice. Probably nobody ever doubted that a house could be heated entirely by direct solar energy. The conflict between idea and reality has been in the size and expense of the necessary gadgetry to collect heat and store it against the rainy days. So this house does not attempt an installation large enough for 100 per cent solar heat; the approach was rather to do what seemed reasonable with the sun's energy, and supplement that with auxiliary electric heating.

The house is in the Boston area, which is considered to be about the northern limit for solar space heating. It is the latest development of M. I. T.'s Solar Energy Research Project, endowed by Dr. Godfrey L. Cabot of Boston.

This house uses water as the heat storage medium, and the necessary size of the water tank is a limiting factor, as well as the size of the heat collector plate. The tank here holds 1200 gal. The electric heat is easily added to this system by the simple means of introducing two 3.5 kw immersion-type heaters in the water storage tank.

The heat collector is of the flat-plate type (parabolic, conical and other shapes have been studied), as the flat form seems generally the most practical. It consists of a blackened metal sheet behind two sheets of glass, the assembly tilted toward the winter sun.

If we could put a heat collector perpendicular to the suns rays somewhere outside the atmosphere, there would be about 430 Btu per hr. per sq. ft. available outside the glass. But by the time the solar radiation has passed through

DETAIL OF SOLAR HEAT COLLECTOR

The diagram, right, shows the main features of the M. I. T. solar heating system—how the heat is picked up, stored and distributed. The heat collector, detailed above, traps about 37 per cent of the solar energy hitting the glass. An opening at the bottom lets out water in case the glass gets broken. In the photo, Edmund Czapek is examining a flow meter in the attic; note the heavy insulation on a line leading to the storage tank

Another view of the house with "sun-measuring" gadgets [illegible] pyrheliometers evident on the trellis and peak (right) of the roof. They measure the intensity of solar radiation outside a collector tilted at a 57 degree [illegible] vertically

From the pages of ARCHITECTURAL RECORD 1949

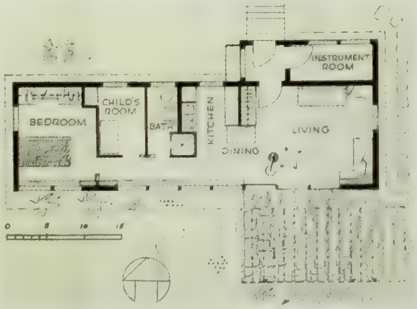
Nothing new under the sun

How far have we come? We ask this question in the face of this 600-square-foot test house built by the Massachusetts Institute of Technology's Solar Energy Research Project and published in RECORD in April 1949. Sustainability, let alone such trendy programs as the U.S. Green Building Council's LEED rating system, was not a term one would likely hear from an architect's lips before the 1990s. The only "points" this house won were probably from curious onlookers wondering what on earth MIT had done this time.

The concept employed in the house is simple enough: sunlight heats roof-mounted, glass-enmeshed copper panels that in turn heat water flowing through pipes from a large storage tank. A thermostat then regulates the flow of hot water through a second set of pipes in the ceiling of the house, thereby warming the structure. When the New England winter temperatures fall too low (the copper panels' efficiency is only 37 percent), a make-up electric system heats the tank's water as needed.

The MIT test house provides some proof, if needed, that while our terminology may change, interest in sustainability precedes us. As some may remember, the Carter Administration's tax credits were the golden age of the solar collector, but the sun set on those in the 1980s. MIT continues its research today in various areas of sustainable architecture through its Building Technology Program.

The MIT house wasn't architecturally showstopping, but it incorporates other common-sense sustainable gestures, such as a large expanse of south-facing glass for winter heat gain—a design and site consideration the vast majority of mass-market, American homebuilders shoehorning a site with new homes would hardly contemplate today. So, have we really come that far? Probably not. There may be nothing new under the sun, but it doesn't have to stay that way. *Russell Fortmeyer*



Floor plan, 1949 MIT solar test house, with an equipment room for the solar heating system about as large as the child's bedroom.

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